



HARGIS + ASSOCIATES, INC.
HYDROGEOLOGY • ENGINEERING

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February 24, 2017

VIA EMAIL AND GEOTRACKER UPLOAD

Mr. Carl Bernhardt
CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SANTA ANA REGION
3737 Main Street, Suite 500
Riverside, California 92501-3348

Re: 2016 Annual Groundwater Monitoring and Groundwater Remediation System
Operation Results, Raytheon Company, Former Building 684, Fullerton, California

Dear Mr. Bernhardt:

This letter presents the results of groundwater monitoring and operation of the full-scale groundwater remediation system (remediation system) for the period January 2016 through December 2016 at the Raytheon Company, Former Building 684 site (the Site), located at 2357 Moore Avenue (formerly 651 North Gilbert Street), Fullerton, California (Figures 1 and 2). Groundwater samples were collected from accessible monitor, extraction, and Orange County Water District (OCWD) test wells in May and December 2016 in general accordance with the sampling schedule identified in the letter from Hargis + Associates, Inc. (H+A) to the California Regional Water Quality Control Board, Santa Ana Region (CRWQCB) dated November 8, 2002 (H+A, 2002).

GROUNDWATER MONITORING

Groundwater monitoring was conducted at the Site in May and December 2016 in general accordance with the existing schedule (H+A, 2002). Groundwater monitoring conducted in December 2016 was comprised of water level measurements in accessible monitor and extraction wells and collection of groundwater samples in all accessible monitor and extraction wells (Tables 1 and 2).

GROUNDWATER LEVELS

Water levels were measured in accessible monitor wells, extraction wells, and an OCWD test well in May and December 2016 (Table 1). Figures depicting water level elevations based on data obtained during annual monitoring conducted in December 2016 have been prepared (Figures 3 through 8). December 2016 water levels were used to prepare water level elevation figures representative of groundwater conditions.

The Site hydrostratigraphic units have been previously described in detail (H+A, 2013). Shallow zone and Upper Unit A water level data obtained in December 2016 indicate the same general patterns of hydraulic head and directions of groundwater flow that have been historically observed in these units prior to remediation system operations (Figures 3 through 5) (H+A, 1997). In December 2016, the direction of groundwater flow in the shallow zone was generally toward the east (Figure 3), and toward the north-northeast in the deeper shallow zone (Figure 4). In December 2016, the direction of groundwater flow in the Upper Unit A was generally toward the west-southwest (Figure 5).

Extraction of groundwater from Lower Unit A ceased in April 2004 with approval from CRWQCB (CRWQCB, 2004). In December 2016, the direction of groundwater flow in Lower Unit A was generally toward the south and southwest (Figure 6), which is consistent with the flow direction observed prior to remediation system operations (H+A, 1997) As discussed in the previous monitoring submittal, Lower Unit A water level variations and/or changes in the historical direction of groundwater flow in this unit

Other Offices:
Folsom, CA
Mesa, AZ
Tucson, AZ

Mr. Carl Bernhardt
February 23, 2017
Page 2

may, in part, account for the detections of tetrachloroethylene (PCE) and trichloroethylene (TCE) in this unit in 2016 that are not attributable to the Site.

In December 2016, the direction of groundwater flow in the A/B aquitard was toward the southwest (Figure 7), which is consistent with the flow direction observed prior to remediation system operations (H+A, 1997). As discussed in the previous monitoring submittal, A/B aquitard water level variations and/or the change in the historical direction of groundwater flow in this unit may, in part, account for the detections of PCE and TCE in this unit that are not attributable to the Site (H+A, 2011, 2012, 2013, 2014, 2015, and 2016).

In December 2016, the direction of groundwater flow in Unit B was toward the southwest (Figure 8), which was consistent with the historical trends observed in this unit (H+A, 2013). As discussed in the previous monitoring submittal, the detections and concentration increases of PCE and TCE in this unit are not attributable to the Site.

GROUNDWATER CHEMICAL QUALITY

All groundwater samples collected during monitoring activities conducted in 2016 were analyzed by Eurofins Calscience Inc., Garden Grove, California, for volatile organic compounds (VOCs) using U.S. Environmental Protection Agency Method 8260B (Appendix A). Groundwater samples collected for analysis of 1,4-dioxane in May 2016 were analyzed by Advanced Technology Laboratories, Signal Hill, California (Appendix A). TCE was the principal VOC detected in groundwater samples collected from extraction wells at the Site. Historically, other VOCs have been intermittently detected in groundwater samples collected from various wells at the Site (H+A, 1992). However, beginning in May 2005 and persisting to date at several locations, PCE and TCE have been detected in off-Site monitor wells at concentrations that are not consistent with historical groundwater concentration trends and observed water level elevation and gradient conditions associated with the respective wells. The lines of evidence that supported the conclusion that PCE and TCE concentrations in this area were increasing as a result of one or more off-Site, non-Raytheon source(s) of PCE and TCE to groundwater were previously described (H+A, 2013).

Chain-of-custody documentation was enclosed with each sample shipment. Quality assurance/quality control samples collected during monitoring in 2016 comprised trip blanks that accompanied each sample shipment, rinsate blanks, and field duplicates.

The principle VOC in groundwater is TCE (Table 2); PCE, 1,1-dichloroethylene (1,1-DCE), and all other detected compounds can be found in Table 3. Figures depicting the concentrations of TCE, PCE, and 1,1-DCE detected in groundwater samples collected in December 2016 have been prepared (Figures 9 through 18). Water quality hydrographs depicting the concentrations of TCE in extraction well groundwater samples obtained through December 2016 have been prepared (Figures 19 through 30). Comparisons of the historical concentrations of TCE with concentrations detected in December 2016 generally indicate stable or declining trends of TCE concentrations at the Site.

GROUNDWATER REMEDIATION SYSTEM

The remediation system is a semi-automated, pump-and-treat system designed to remediate groundwater at the Site in the underlying hydrostratigraphic units identified as the shallow zone and Unit A. The remediation system consists of the following major subsystems:

Mr. Carl Bernhardt
February 23, 2017
Page 3

- Extraction/collection system;
- Treatment system;
- Disposal system;
- Treatment system utilities;
- Electrical system; and
- Control system.

The extraction/collection system is used to extract groundwater from the shallow zone and Unit A, and convey the extracted groundwater to the treatment system. The treatment system is used to reduce the concentration of TCE in the extracted groundwater to meet treatment objectives using liquid phase carbon adsorption. The disposal system is used to convey and dispose of the treated groundwater into the subsurface using injection wells screened in both Upper and Lower Unit A. Treatment system utilities are provided to treat water generated during non-routine operations. An electrical system is provided to distribute power to the remediation system components. A control system regulates the operation of the major subsystems using microprocessor-based controllers.

Full-scale groundwater remediation commenced March 12, 1996. Groundwater historically has been extracted from the Shallow Zone, Upper Unit A, and Lower Unit A. In April 2004, groundwater extraction from Lower Unit A was discontinued, as approved by the CRWQCB (CRWQCB, 2004).

During the period January 1, 2016 through December 31, 2016, the groundwater remediation system treated approximately 39,913,762 gallons of water and removed approximately 2.7 gallons of TCE. TCE concentrations detected in groundwater samples collected from extraction wells are summarized in Figures 15 through 26. Through December 2016, the full-scale remediation system has treated approximately 1,487,128,372 gallons of water and removed approximately 109 gallons of TCE.

SOIL VAPOR EXTRACTION SYSTEM

The soil vapor extraction (SVE) system is designed to treat VOCs in soil vapor, primarily TCE, which is extracted from two dual-nested SVE wells SVE-100S/D and SVE-101S/D. These two nested sets of SVE wells both have well screens that were installed at an angle of approximately 45-degrees from horizontal. Each nested SVE well has a shallow screened interval from approximately 5 to 25 feet below land surface (bls) and a deeper screened interval from approximately 25 to 50 feet bls. The trace of the SVE well screens in a horizontal plane projected onto land surface is illustrated on Figure 31. Treated soil vapors are discharged through a 35-foot stack which is regulated by the South Coast Air Quality Management District (SCAQMD) (Permit G37741, A/N 577664). Inside the enclosure, operational components include:

- two 1,000-pound vapor phase granular activated carbon adsorption vessels (2 vessels operated in series) with a 35-foot tall exhaust stack;
- one 250 standard cubic feet per minute (10 horsepower [hp]) positive displacement blower;
- an airstream heat exchanger with 1 hp cooling fan;
- one 81-gallon vapor-liquid separator (knock-out pot);
- a 5 gallon per minute transfer pump (1/2 hp);
- a 550-gallon condensate water storage tank;
- conveyance pipelines; and
- miscellaneous instrumentation and controls.

Mr. Carl Bernhardt
February 23, 2017
Page 4

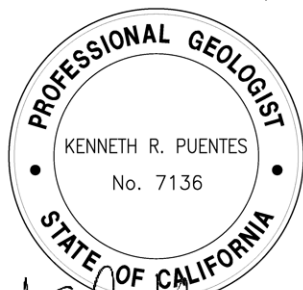
From January 1, 2015 through April 28, 2015, the SVE system remained non-operational due to an impending permit modification through SCAQMD. At the direction of SCAQMD, an application for a modification of the previous permit was submitted and on February 20, 2015, SCAQMD subsequently issued the modified second operational permit G34754, A/N 571829. In April 2015, startup operations under this modified second permit resumed and lasted until July 2015, until terminated due to permit condition related issues. A final permit modification was submitted in August 2015, and SCAQMD subsequently issued the modified third and current operational permit G37741, A/N 577664. The system was then restarted November 5, 2015.


During the period January 1, 2016 through December 31, 2016, the SVE system removed approximately 49.5 pounds of total VOCs and approximately 44.1 pounds of TCE (Table 4). Since January 2015, the monthly mass removal rate and TCE concentrations have declined and are approaching asymptotic conditions (Figure 32). In addition, system influent, effluent, and midpoint field samples were collected weekly at the SVE System and analyzed in the field using a calibrated flame ionization detector (FID). Weekly FID measurements collected at the system were used to verify that the SCAQMD permit limits were not exceeded and, if necessary, any operational adjustments were made to remain in permit compliance.


Please contact me at (858) 455-6500, extension 102, or kpuentes@hargis.com, with any questions or comments.

Sincerely,

HARGIS + ASSOCIATES, INC




Kenneth R. Puentes, PG 7136, CHG 714
Principal Hydrogeologist


Tyler J. Evans
Hydrogeologist

KRP/TJE/jak

Enclosures: Tables 1 through 4
Figures 1 through 32
Appendix A – Laboratory Analytical Data (*Provided on CD*)

cc (w/encl.) Mr. Paul Brewer, Raytheon Company (4 hard copies via Federal Express Standard)

Mr. Carl Bernhardt
February 23, 2017
Page 5

REFERENCES

- California Regional Water Quality Control Board (CRWQCB), 2004. Letter to P. Brewer, Raytheon Systems Company, from C. Bernhardt, RWQCB, re: Proposed Groundwater Monitoring Well Construction and Destruction, Former Raytheon Facility, 651 North Gilbert Street, Fullerton, California, Regional Board Case Number: 083000187T, dated March 12, 2004.
- Hargis + Associates, Inc., 1992. Phase V Groundwater Assessment, Hughes Aircraft Company, Building 684, Fullerton, California. Prepared for Hughes Aircraft Company (HAC), Fullerton, California. September 14, 1992.
- _____, 1997. Results of Groundwater Monitoring and Groundwater Remediation System Operation, March through December 1996, Hughes Aircraft Company, Building 684, Fullerton, California. March 26, 1997.
- _____, 2002. Letter to Mr. Carl A. Bernhardt California Regional Water Quality Control Board, re: Proposed Groundwater Monitoring Program, Hughes Aircraft Company, Building 684, Fullerton, California, dated November 8, 2002.
- _____, 2011. Results of Groundwater Monitoring and Groundwater Remediation System Operation, January through December 2010, Raytheon Company, Former Building 684, Fullerton, California. February 18, 2011.
- _____, 2012. Results of Groundwater Monitoring and Groundwater Remediation System Operation, January through December 2011, Raytheon Company, Former Building 684, Fullerton, California. January 31, 2012.
- _____, 2013. Results of Groundwater Monitoring and Groundwater Remediation System Operation, January through December 2012, Raytheon Company, Former Building 684, Fullerton, California. February 14, 2013.
- _____, 2014. 2013 Annual Groundwater Monitoring and Groundwater Remediation System Operation Results, Raytheon Company, Former Building 684, Fullerton, California. February 13, 2014.
- _____, 2015. 2014 Annual Groundwater Monitoring and Groundwater Remediation System Operation Results, Raytheon Company, Former Building 684, Fullerton, California. February 11, 2015.
- _____, 2016. 2015 Annual Groundwater Monitoring and Groundwater Remediation System Operation Results, Raytheon Company, Former Building 684, Fullerton, California. May 17, 2016.

TABLES

TABLE 1
WATER LEVEL ELEVATION DATA

WELL IDENTIFIER	DATE MEASURED	MEASURING POINT ELEVATION (feet msl)	DEPTH TO WATER (feet bmp)	WATER LEVEL ELEVATION (feet msl)
Shallow Zone Water Table Monitor Wells				
S-02	05/24/16	100.91	60.17	40.74
S-02	12/19/16	100.91	61.20	39.71
S-03	05/24/16	101.60	62.85	38.75
S-03	12/19/16	101.60	63.74	37.86
S-04	05/24/16	100.95	63.90	37.05
S-04	12/19/16	100.95	64.95	36.00
S-05	05/24/16	98.92	DRY @ 47.80	--
S-05	12/19/16	98.92	DRY @ 47.80	--
S-07	05/24/16	99.48	55.52	43.96
S-07	12/19/16	99.48	56.45	43.03
S-08	05/24/16	95.52	58.78	36.74
S-08	12/20/16	95.52	59.24	36.28
S-18	05/24/16	98.79	57.50	41.29
S-18	12/20/16	98.79	59.25	39.54
S-21	05/24/16	95.81	DRY @ 39.70	--
S-21	12/19/16	95.81	DRY @ 39.70	--
S-32	05/24/16	101.17	63.52	37.65
S-32	12/19/16	101.17	64.31	36.86
Deeper Shallow Zone Monitor Wells				
S-14	05/24/16	96.96	54.25	42.71
S-14	12/19/16	96.96	55.11	41.85
S-15	05/24/16	95.76	42.46	53.30
S-15	12/19/16	95.76	48.30	47.46

TABLE 1
WATER LEVEL ELEVATION DATA

WELL IDENTIFIER	DATE MEASURED	MEASURING POINT ELEVATION (feet msl)	DEPTH TO WATER (feet bmp)	WATER LEVEL ELEVATION (feet msl)
Deeper Shallow Zone Monitor Wells (continued)				
S-24	05/24/16	95.66	47.81	47.85
S-24	12/19/16	95.66	48.78	46.88
S-26	05/24/16	97.68	46.76	50.92
S-26	12/19/16	97.68	47.31	50.37
S-27	05/24/16	119.98	86.86	33.12
S-27	12/19/16	119.98	88.20	31.78
S-29	05/24/16	91.42	43.55	47.87
S-29	12/19/16	91.42	44.77	46.65
S-30	05/24/16	95.00	46.91	48.09
S-30	12/19/16	95.00	47.79	47.21
S-31	05/24/16	94.31	47.10	47.21
S-31	12/19/16	94.31	48.06	46.25
SE-01	05/24/16	98.27	61.42	36.85
SE-01	12/19/16	98.27	62.10	36.17
Shallow Zone Extraction Wells				
SE-04	05/24/16	95.53	47.37	48.16
SE-04	12/19/16	95.53	UTM	--
Upper Unit A Monitor Wells				
UA-02	05/24/16	98.82	64.89	33.93
UA-02	12/19/16	98.82	65.69	33.13
UA-06	05/24/16	97.53	63.27	34.26
UA-06	12/19/16	97.53	63.98	33.55
UA-07	05/24/16	98.61	63.70	34.91
UA-07	12/19/16	98.61	64.30	34.31

TABLE 1
WATER LEVEL ELEVATION DATA

WELL IDENTIFIER	DATE MEASURED	MEASURING POINT ELEVATION (feet msl)	DEPTH TO WATER (feet bmp)	WATER LEVEL ELEVATION (feet msl)
Upper Unit A Monitor Wells (continued)				
UA-08	05/24/16	95.05	60.96	34.09
UA-08	12/19/16	95.05	61.83	33.22
UA-11	05/24/16	94.89	60.67	34.22
UA-11	12/19/16	94.89	61.41	33.48
UA-12	05/24/16	91.07	56.76	34.31
UA-12	12/19/16	91.07	57.60	33.47
Upper Unit A Extraction Wells				
UAX-01	05/24/16	97.45	74.31	23.14
UAX-01	12/19/16	97.45	74.80	22.65
UAX-02	05/24/16	97.08	84.15	12.93
UAX-02	12/19/16	97.08	86.03	11.05
UAX-03	05/24/16	92.63	78.98	13.65
UAX-03	12/19/16	92.63	79.87	12.76
Lower Unit A Monitor Wells				
UA-04D	05/24/16	100.31	65.75	34.56
UA-04D	12/19/16	100.31	66.43	33.88
UA-06D	05/24/16	97.45	62.50	34.95
UA-06D	12/19/16	97.45	63.05	34.40
UA-07D	05/24/16	99.46	63.14	36.32
UA-07D	12/19/16	99.46	63.67	35.79
UA-08D	05/24/16	94.86	60.33	34.53
UA-08D	12/19/16	94.86	61.01	33.85
UA-10D	05/24/16	93.89	58.72	35.17
UA-10D	12/19/16	93.89	59.23	34.66

TABLE 1
WATER LEVEL ELEVATION DATA

WELL IDENTIFIER	DATE MEASURED	MEASURING POINT ELEVATION (feet msl)	DEPTH TO WATER (feet bmp)	WATER LEVEL ELEVATION (feet msl)
Lower Unit A Monitor Wells (continued)				
UA-11D	05/24/16	94.35	59.60	34.75
UA-11D	12/19/16	94.35	60.21	34.14
UA-12D	05/24/16	90.57	56.04	34.53
UA-12D	12/19/16	90.57	56.80	33.77
UA-13D	05/24/16	91.28	55.31	35.97
UA-13D	12/19/16	91.28	56.12	35.16
UA-14D	05/24/16	91.08	56.28	34.80
UA-14D	12/19/16	91.08	56.91	34.17
UA-15D	05/24/16	95.69	61.53	34.16
UA-15D	12/19/16	95.69	62.26	33.43
UA-16D	05/24/16	93.86	58.83	35.03
UA-16D	12/19/16	93.86	59.39	34.47
UA-17D	05/24/16	93.89	58.86	35.03
UA-17D	12/19/16	93.89	59.44	34.45
Lower Unit A Extraction Wells				
LAX-01	05/24/16	88.77	53.75	35.02
LAX-01	12/19/16	88.77	54.32	34.45
LAX-02	05/24/16	96.18	61.60	34.58
LAX-02	12/19/16	96.18	62.17	34.01
LAX-03	05/24/16	96.66	62.33	34.33
LAX-03	12/19/16	96.66	63.05	33.61
A/B Aquitard Monitor Wells				
AB-01	05/24/16	97.24	62.21	35.03
AB-01	12/19/16	97.24	62.78	34.46

TABLE 1
WATER LEVEL ELEVATION DATA

WELL IDENTIFIER	DATE MEASURED	MEASURING POINT ELEVATION (feet msl)	DEPTH TO WATER (feet bmp)	WATER LEVEL ELEVATION (feet msl)
A/B Aquitard Monitor Wells (continued)				
AB-02	05/24/16	96.29	60.81	35.48
AB-02	12/19/16	96.29	61.50	34.79
AB-03	05/24/16	96.64	61.60	35.04
AB-03	12/19/16	96.64	62.30	34.34
AB-05	05/24/16	90.99	55.87	35.12
AB-05	12/19/16	90.99	56.22	34.77
AB-06	05/24/16	93.67	59.01	34.66
AB-06	12/19/16	93.67	59.45	34.22
AB-07	05/24/16	90.62	58.20	32.42
AB-07	12/19/16	90.62	57.00	33.62
AB-08	05/24/16	93.92	59.43	34.49
AB-08	12/19/16	93.92	59.90	34.02
Unit B Monitor Wells				
UB-01	05/24/16	100.47	66.78	33.69
UB-01	12/19/16	100.47	67.00	33.47
UB-02	05/24/16	91.38	59.37	32.01
UB-02	12/19/16	91.38	59.52	31.86
UB-03	05/24/16	94.94	62.42	32.52
UB-03	12/19/16	94.94	62.75	32.19
UB-04	05/24/16	94.00	61.21	32.79
UB-04	12/19/16	94.00	61.52	32.48
UB-05	05/24/16	90.59	58.96	31.63
UB-05	12/19/16	90.59	58.57	32.02

TABLE 1

WATER LEVEL ELEVATION DATA

WELL IDENTIFIER	DATE MEASURED	MEASURING POINT ELEVATION (feet msl)	DEPTH TO WATER (feet bmp)	WATER LEVEL ELEVATION (feet msl)
Unit B Monitor Wells (continued)				
UB-06	05/24/16	93.83	61.41	32.42
UB-06	12/19/16	93.83	61.65	32.18
Orange County Water District Test Wells				
36A6-255	05/24/16	92.09	60.20	31.89
36A6-255	12/19/16	92.09	60.32	31.77
36A6-855	05/24/16	92.09	94.43	-2.34
36A6-855	12/19/16	92.09	98.66	-6.57

FOOTNOTES

msl = Mean sea level
 bmp = Below measuring point
 UTM = Unable to measure

TABLE 2
TRICHLOROETHYLENE IN GROUNDWATER SAMPLES

WELL IDENTIFIER	SAMPLE DATE	QUALITY ASSURANCE CODE	CONCENTRATION (ug/l)
Shallow Zone Water Table Monitor Wells			
SE-01	12/20/16	ORG	6,400
S-02	12/19/16	ORG	2.7
S-03	12/19/16	ORG	0.93 J
S-04	12/19/16	ORG	88
S-04	12/19/16	FD	79
S-07	12/19/16	ORG	1.4
S-08	12/20/16	ORG	20,000
S-21	--	--	NS
S-32	12/19/16	ORG	10
Deeper Shallow Zone Monitor Wells			
S-14	12/19/16	ORG	0.52 J
S-15	12/19/16	ORG	2.1
S-18	12/20/16	ORG	1.2
S-24	12/19/16	ORG	3.2
S-26	12/19/16	ORG	<1.0
S-27	12/19/16	ORG	<1.0
S-29	12/20/16	ORG	0.70 J
S-30	12/20/16	ORG	0.37 J
S-31	12/20/16	ORG	<1.0
Shallow Zone Extraction Well			
SE-04	--	--	NS
Shallow Zone Horizontal Extraction Wells			
HEW-01	05/24/16	ORG	2,300
HEW-01	05/24/16	FD	2,100
HEW-01	12/20/16	ORG	2,000
HEW-01	12/20/16	FD	2,000
HEW-02	12/20/16	ORG	170
HEW-03	05/24/16	ORG	180
HEW-03	12/19/16	ORG	150
HEW-04	05/24/16	ORG	240
HEW-04	12/20/16	ORG	210
HEW-05	05/24/16	ORG	200
HEW-05	12/20/16	ORG	200
Upper Unit A Monitor Wells			
UA-02	12/19/16	ORG	3.2
UA-06	12/19/16	ORG	0.79 J
UA-06	12/19/16	FD	1.5
UA-07	12/19/16	ORG	2.2
UA-08	12/19/16	ORG	12
UA-11	12/20/16	ORG	2.0
UA-12	12/20/16	ORG	3.4

TABLE 2
TRICHLOROETHYLENE IN GROUNDWATER SAMPLES

WELL IDENTIFIER	SAMPLE DATE	QUALITY ASSURANCE CODE	CONCENTRATION (ug/l)
Upper Unit A Extraction Wells			
UAX-01	05/24/16	ORG	21
UAX-01	12/19/16	ORG	14
UAX-02	05/24/16	ORG	8.0
UAX-02	12/19/16	ORG	5.2
UAX-03	05/24/16	ORG	12
UAX-03	12/19/16	ORG	10
Lower Unit A Monitor Wells			
UA-04D	12/19/16	ORG	<1.0
UA-06D	12/19/16	ORG	<1.0
UA-07D	12/19/16	ORG	<1.0
UA-08D	12/19/16	ORG	2.0
UA-10D	12/20/16	ORG	<1.0
UA-11D	12/20/16	ORG	6.6
UA-12D	12/20/16	ORG	0.40 J
UA-13D	12/20/16	ORG	0.78 J
UA-13D	12/20/16	FD	0.89 J
UA-14D	12/20/16	ORG	0.50 J
UA-15D	12/19/16	ORG	<1.0
UA-16D	12/20/16	ORG	<1.0
UA-17D	12/20/16	ORG	<1.0
UA-17D	12/20/16	FD	<1.0
Lower Unit A Extraction Wells			
LAX-01	05/24/16	ORG	<1.0
LAX-01	12/19/16	ORG	<1.0
LAX-02	05/25/16	ORG	0.44 J
LAX-02	12/19/16	ORG	<1.0
LAX-03	05/24/16	ORG	0.95 J
LAX-03	12/19/16	ORG	0.73 J
Unit A Injection Wells			
UAI-01	--	--	NS
UAI-02	--	--	NS
UAI-03	--	--	NS
UAI-04	--	--	NS
UAI-05	--	--	NS
A/B Aquitard Monitor Wells			
AB-01	12/19/16	ORG	<1.0
AB-02	12/19/16	ORG	15
AB-02	12/19/16	FD	14
AB-03	12/19/16	ORG	<1.0
AB-05	12/20/16	ORG	<1.0
AB-06	12/20/16	ORG	<1.0
AB-07	12/20/16	ORG	7.2
AB-08	12/20/16	ORG	0.47 J

TABLE 2
TRICHLOROETHYLENE IN GROUNDWATER SAMPLES

WELL IDENTIFIER	SAMPLE DATE	QUALITY ASSURANCE CODE	CONCENTRATION (ug/l)
Unit B Monitor Wells			
UB-01	12/20/16	ORG	<1.0
UB-02	12/20/16	ORG	<1.0
UB-03	12/20/16	ORG	2.8
UB-04	12/20/16	ORG	15
UB-05	12/20/16	ORG	0.54 J
UB-06	12/20/16	ORG	5.8
Quality Assurance/Quality Control Samples			
TB-052416	05/24/16	TB	<1.0
TB-121916	12/19/16	TB	<1.0
TB-122016	12/20/16	TB	<1.0
RB-121916A	12/19/16	RB	<1.0
RB-121916C	12/19/16	RB	<1.0
RB-121916D	12/19/16	RB	<1.0
RB-122016A	12/20/16	RB	<1.0
RB-122016B	12/20/16	RB	<1.0
RB-122016C	12/20/16	RB	<1.0

FOOTNOTES

- (<) = Less than; numerical value is the Reporting Limit for Trichloroethylene
- FD = Field duplicate sample
- NS = Not sampled
- ORG = Original sample
- RB = Rinsate blank sample
- TB = Trip blank sample
- ug/l = Micrograms per liter
- J = Estimated Value

TABLE 3
**OTHER VOLATILE ORGANIC COMPOUNDS
IN GROUNDWATER SAMPLES**

WELL IDENTIFIER	SAMPLE DATE	QUALITY ASSURANCE CODE	COMPOUND	CONCENTRATION (ug/l)
Shallow Zone Water Table Monitor Wells				
SE-01	12/20/16	ORG	Tetrachloroethylene	130
S-04	12/19/16	ORG	Tetrachloroethylene	0.42 J
S-08	12/20/16	ORG	Tetrachloroethylene	610
Deeper Shallow Zone Monitor Wells				
S-30	12/20/16	ORG	1,1-Dichloroethylene	0.95 J
S-31	12/20/16	ORG	Benzene	0.23J
Shallow Zone Extraction Wells				
HEW-01	05/24/16	ORG	Tetrachloroethylene	25
HEW-01	05/24/16	ORG	1,4-Dioxane	0.55
HEW-01	05/24/16	FD	Tetrachloroethylene	24
HEW-01	05/24/16	FD	1,4-Dioxane	2.1
HEW-01	12/20/16	ORG	Tetrachloroethylene	10 J
HEW-01	12/20/16	ORG	1,4-Dioxane	3.8
HEW-01	12/20/16	FD	Tetrachloroethylene	9.2 J
HEW-01	12/20/16	FD	1,4-Dioxane	3.8
HEW-02	12/20/16	ORG	Chlorobenzene	0.18 J
HEW-02	12/20/16	ORG	1,1-Dichloroethylene	1.7
HEW-02	12/20/16	ORG	Tetrachloroethylene	0.68 J
HEW-02	12/20/16	ORG	1,4-Dioxane	1.6
HEW-03	05/24/16	ORG	1,1-Dichloroethylene	2.8
HEW-03	05/24/16	ORG	Tetrachloroethylene	2.0
HEW-03	05/24/16	ORG	1,4-Dioxane	4.2
HEW-03	12/19/16	ORG	1,1-Dichloroethylene	3.4
HEW-03	12/19/16	ORG	Tetrachloroethylene	1.4
HEW-03	12/19/16	ORG	1,4-Dioxane	1.0
HEW-04	05/24/16	ORG	1,1-Dichloroethylene	1.3 J
HEW-04	05/24/16	ORG	Tetrachloroethylene	2.6
HEW-04	05/24/16	ORG	1,4-Dioxane	4.2
HEW-04	12/20/16	ORG	1,1-Dichloroethylene	1.2 J
HEW-04	12/20/16	ORG	Tetrachloroethylene	0.90 J
HEW-04	12/20/16	ORG	1,4-Dioxane	4.4
HEW-05	05/24/16	ORG	1,4-Dioxane	0.49
HEW-05	12/20/16	ORG	cis-1,2-Dichloroethylene	0.57 J
Upper Unit A Monitor Wells				
UA-06	12/19/16	ORG	Tetrachloroethylene	2.5
UA-06	12/19/16	FD	Tetrachloroethylene	2.8
UA-07	12/19/16	ORG	1,1-Dichloroethane	3.5
UA-08	12/19/16	ORG	1,1-Dichloroethylene	0.60 J

TABLE 3
**OTHER VOLATILE ORGANIC COMPOUNDS
IN GROUNDWATER SAMPLES**

WELL IDENTIFIER	SAMPLE DATE	QUALITY ASSURANCE CODE	COMPOUND	CONCENTRATION (ug/l)
Upper Unit A Extraction Wells (continued)				
UA-11	12/20/16	ORG	Tetrachloroethylene	6.4
UA-12	12/20/16	ORG	Tetrachloroethylene	0.56 J
Upper Unit A Extraction Wells				
UAX-01	05/24/16	ORG	1,1-Dichloroethylene	4.7
UAX-01	05/24/16	ORG	1,4-Dioxane	0.28
UAX-01	12/19/16	ORG	1,1-Dichloroethylene	7.7
UAX-01	12/19/16	ORG	1,4-Dioxane	1.1
UAX-02	05/24/16	ORG	1,1-Dichloroethylene	17
UAX-02	05/24/16	ORG	1,1-Dichloroethane	0.51 J
UAX-02	05/24/16	ORG	1,4-Dioxane	1.8
UAX-02	12/19/16	ORG	1,1-Dichloroethylene	16
UAX-02	12/19/16	ORG	1,1-Dichloroethane	0.39 J
UAX-02	12/19/16	ORG	1,4-Dioxane	2.0
UAX-03	05/24/16	ORG	1,1-Dichloroethylene	0.84 J
UAX-03	05/24/16	ORG	1,4-Dioxane	0.13 J
UAX-03	12/19/16	ORG	1,1-Dichloroethylene	0.55 J
Lower Unit A Monitor Wells				
UA-06D	12/19/16	ORG	Tetrachloroethylene	2.5
UA-07D	12/19/16	ORG	1,1-Dichloroethane	1.0 J
UA-07D	12/19/16	ORG	Tetrachloroethylene	0.84 J
UA-10D	12/20/16	ORG	Tetrachloroethylene	11
UA-11D	12/20/16	ORG	Tetrachloroethylene	1.3
UA-12D	12/20/16	ORG	Tetrachloroethylene	0.52 J
UA-14D	12/20/16	ORG	Tetrachloroethylene	32
UA-17D	12/20/16	ORG	Methyl-T Butyl Ether	1.6
UA-17D	12/20/16	FD	Methyl-T Butyl Ether	1.7
Lower Unit A Extraction Wells				
LAX-03	05/24/16	ORG	1,1-Dichloroethylene	1.6
LAX-03	05/24/16	ORG	1,4-Dioxane	0.48
LAX-03	12/19/16	ORG	1,1-Dichloroethylene	0.49 J
A/B Aquitard Monitor Wells				
AB-02	12/19/16	ORG	cis-1,2-Dichloroethylene	6.3
AB-02	12/19/16	ORG	trans-1,2-Dichloroethylene	17
AB-02	12/19/16	ORG	Tetrachloroethylene	1.3
AB-02	12/19/16	FD	cis-1,2-Dichloroethylene	6.1

TABLE 3
**OTHER VOLATILE ORGANIC COMPOUNDS
IN GROUNDWATER SAMPLES**

WELL IDENTIFIER	SAMPLE DATE	QUALITY ASSURANCE CODE	COMPOUND	CONCENTRATION (ug/l)
A/B Aquitard Monitor Wells (continued)				
AB-02	12/19/16	FD	trans-1,2-Dichloroethylene	17
AB-02	12/19/16	FD	Tetrachloroethylene	1.1
AB-05	12/20/16	ORG	Benzene	0.17 J
AB-06	12/20/16	ORG	Acetone	11J
AB-06	12/20/16	ORG	Benzene	0.19 J
AB-06	12/20/16	ORG	Chloroethane	3.6 J
AB-06	12/20/16	ORG	cis-1,2-Dichloroethylene	3.9
AB-06	12/20/16	ORG	trans-1,2-Dichloroethylene	0.59 J
AB-07	12/20/16	ORG	cis-1,2-Dichloroethylene	3.3
AB-07	12/20/16	ORG	trans-1,2-Dichloroethylene	3.5
AB-07	12/20/16	ORG	Tetrachloroethylene	10
AB-07	12/20/16	ORG	Vinyl Chloride	0.49 J
AB-08	12/20/16	ORG	cis-1,2-Dichloroethylene	3.9
AB-08	12/20/16	ORG	Vinyl Chloride	0.48 J
Unit B Monitor Wells				
UB-03	12/20/16	ORG	cis-1,2-Dichloroethylene	5.6
UB-03	12/20/16	ORG	trans-1,2-Dichloroethylene	11
UB-03	12/20/16	ORG	Tetrachloroethylene	2.5
UB-04	12/20/16	ORG	cis-1,2-Dichloroethylene	1.5
UB-04	12/20/16	ORG	trans-1,2-Dichloroethylene	4.5
UB-05	12/20/16	ORG	cis-1,2-Dichloroethylene	4.2
UB-05	12/20/16	ORG	Vinyl Chloride	0.31 J
UB-06	12/20/16	ORG	Vinyl Chloride	0.34 J

FOOTNOTES

FD = Field duplicate sample
 ORG = Original sample
 ug/l = Micrograms per liter
 J = Estimated Value

TABLE 4 - SYSTEM CALCULATIONS
Soil Vapor Extraction (SVE) System

Sample Date	Volume Soil Gas Extracted				Mass Removed			
	Average Flowrate		Hours Operated	Volume Air Extracted	Monthly Mass of Total VOCs Removed	Cumulative Mass of Total VOCs Removed	Monthly Mass TCE Removed	Cumulative Mass TCE Removed
	scfm	m ³ /hr	hr	m ³	lb/month	lb	lb/month	lb
12/03/14	60.0	101.9	168.4	17,166.8	1.3	1.3	1.1	1.1
04/30/15	60.0	101.9	29.9	3,048.0	1.0	2.4	0.9	2.0
05/14/15	67.0	113.8	696.6	79,296.5	25.0	27.4	22.5	24.5
06/25/15	25.0	42.5	683.5	29,031.8	21.6	48.9	19.9	44.4
07/23/15	25.0	42.5	669.0	28,415.9	13.6	62.6	12.4	56.9
11/12/15	128.1	217.7	340.0	74,023.4	36.7	99.2	34.2	91.0
12/17/15	141.6	240.6	517.0	124,379.8	24.3	123.5	23.6	114.6
01/21/16	141.0	239.6	168.4	40,342.0	2.5	126.0	2.3	116.9
02/18/16	96.0	163.1	390.6	63,708.8	3.2	129.2	3.0	120.0
03/17/16	113.2	192.3	583.1	112,113.4	5.6	134.8	5.2	125.1
04/21/16	150.0	254.9	669.4	170,597.6	10.1	144.9	9.5	134.6
05/19/16	166.8	283.3	668.2	189,307.7	6.7	151.6	6.5	141.1
06/23/16	133.4	226.6	509.7	115,522.5	3.4	154.9	3.3	144.4
07/21/16	159.0	270.1	673.6	181,968.0	3.4	158.3	3.2	147.6
08/18/16	153.8	261.2	671.3	175,358.9	3.8	162.1	3.5	151.2
09/15/16	150.0	254.9	672.6	171,413.1	2.9	165.0	2.8	154.0
10/06/16	151.8	257.8	188.0	48,471.1	3.7	168.7	0.6	154.6
11/17/16	155.5	264.2	458.0	121,001.8	2.3	171.0	2.1	156.8
12/08/16	139.8	237.5	887.0	210,681.7	2.1	173.1	1.9	158.7

Footnotes

scfm = Standard cubic feet per minute

 m³/hr = Cubic meter per hour

lb = Pound

VOCs = Volatile organic compounds

TCE = Trichloroethylene

FIGURES

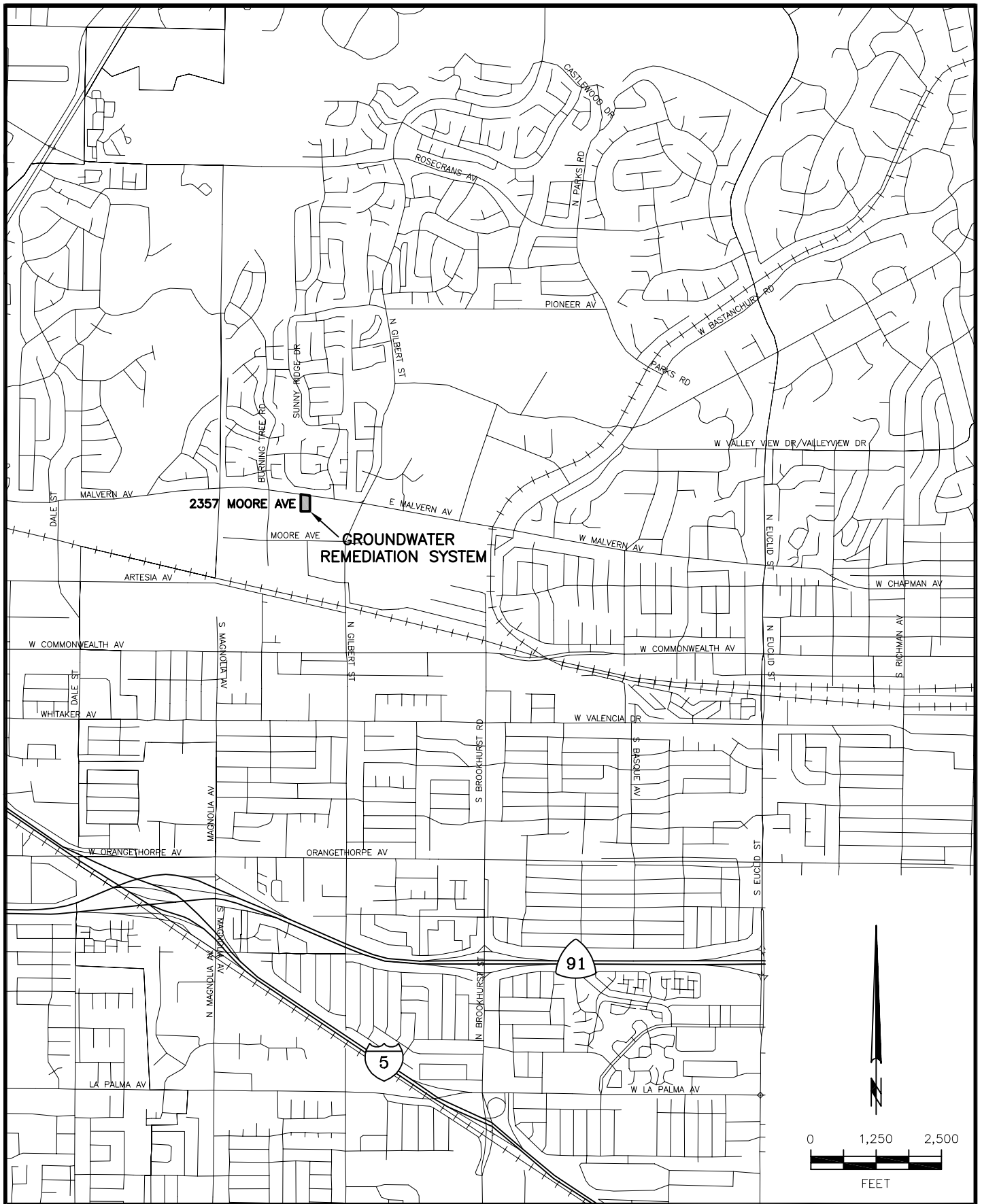
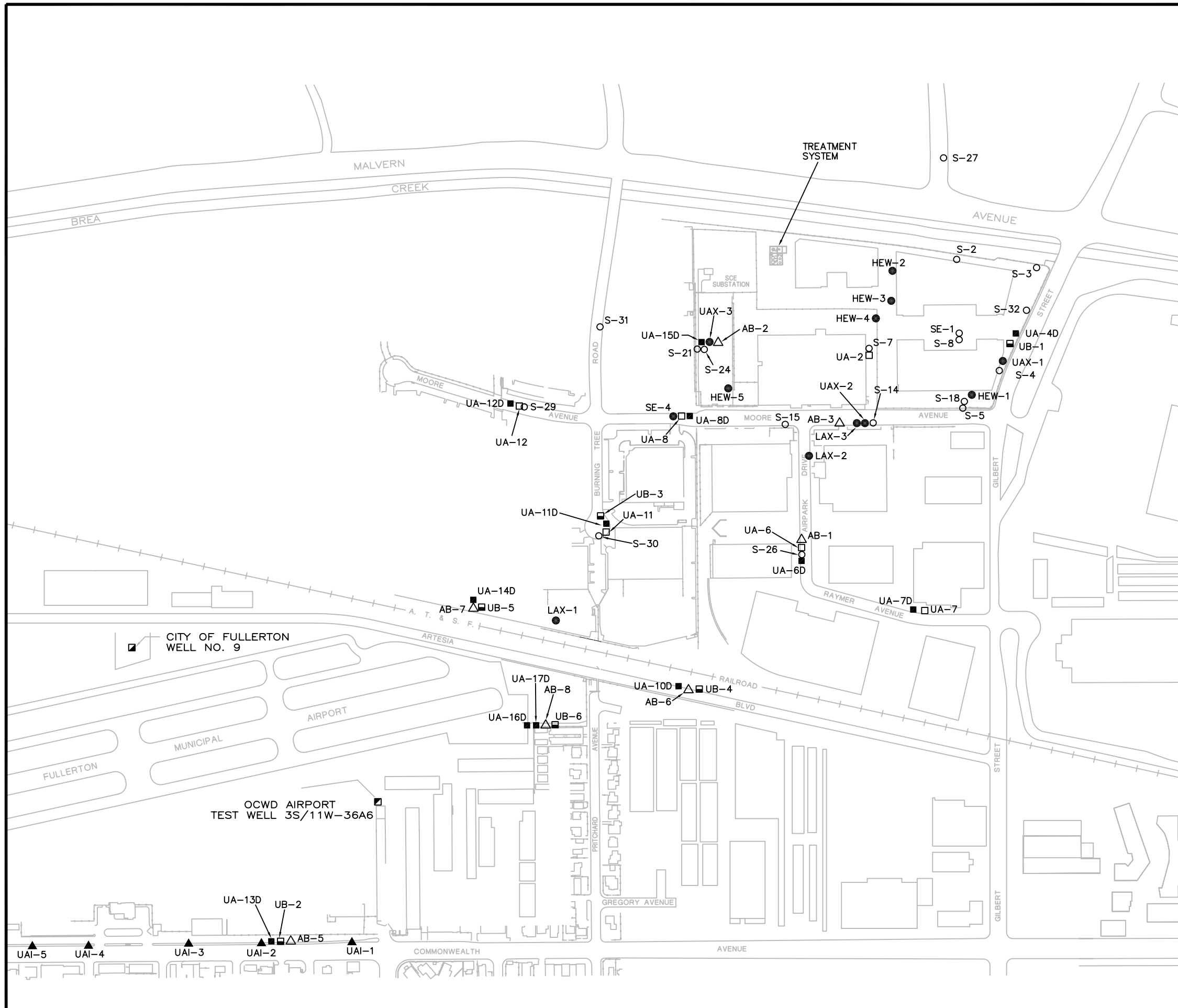
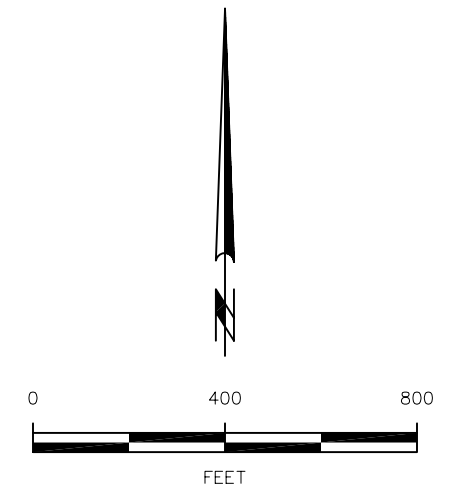


FIGURE 1. SITE LOCATION



EXPLANATION

- S-29 APPROXIMATE LOCATION OF SHALLOW ZONE MONITOR WELL
- HEW-1 APPROXIMATE LOCATION OF EXTRACTION WELL FOR REMEDIATION SYSTEM
- UA-12 APPROXIMATE LOCATION OF UPPER UNIT A MONITOR WELL
- UA-12D APPROXIMATE LOCATION OF LOWER UNIT A MONITOR WELL
- ▲ UAI-2 APPROXIMATE LOCATION OF UNIT A INJECTION WELL
- △ AB-7 APPROXIMATE LOCATION OF A/B AQUITARD MONITOR WELL
- UB-3 APPROXIMATE LOCATION OF UNIT B MONITOR WELL
- CITY OF FULLERTON WELL No.9 APPROXIMATE LOCATION OF CITY OF FULLERTON PRODUCTION WELL
- OCWD TEST WELL 3S/11W-36A6 APPROXIMATE LOCATION OF ORANGE COUNTY WATER DISTRICT TEST WELL
- AT & SF RAILROAD



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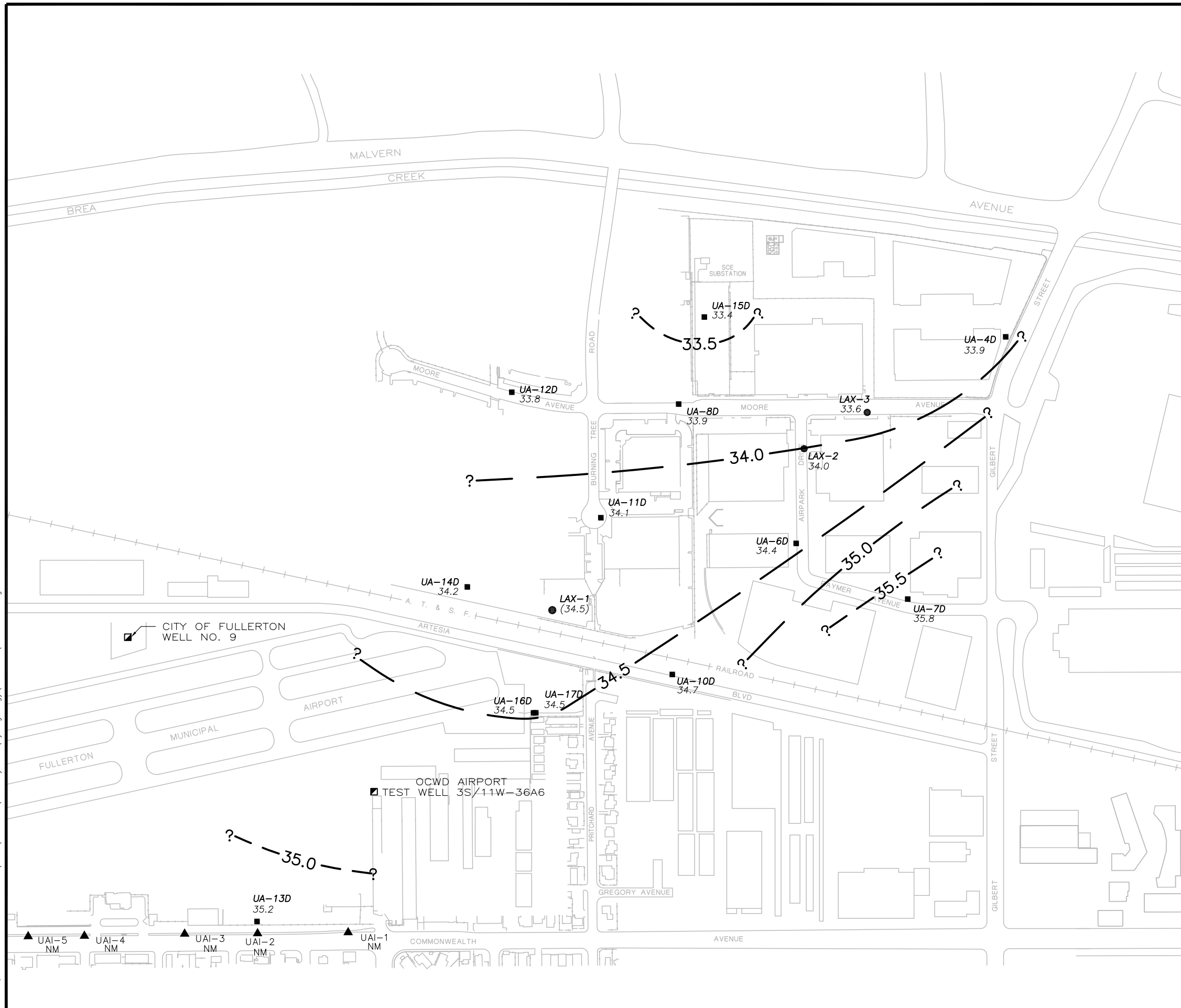
WELL LOCATIONS

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Hydrogeology/Engineering

11/05

FIGURE 2

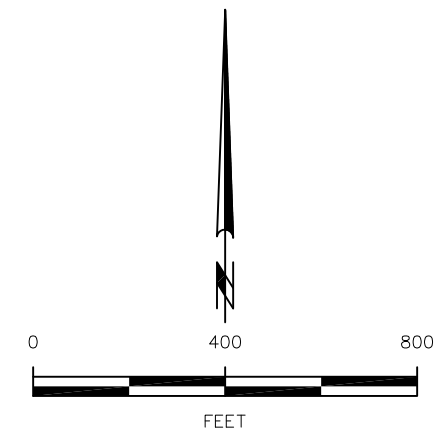
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EXPLANATION

- UA-6D APPROXIMATE LOCATION OF LOWER UNIT A MONITOR WELL
- ▲ UAI-2 APPROXIMATE LOCATION OF UNIT A INJECTION WELL
- LAX-2 APPROXIMATE LOCATION OF LOWER UNIT A EXTRACTION WELL
- CITY OF FULLERTON WELL No.9 APPROXIMATE LOCATION OF CITY OF FULLERTON PRODUCTION WELL
- OCWD TEST WELL 3S/11W-36A6 APPROXIMATE LOCATION OF ORANGE COUNTY WATER DISTRICT TEST WELL
- AT & SF RAILROAD
- UA-6D 34.4 WATER LEVEL ELEVATION IN FEET MEAN SEA LEVEL
- NM WATER LEVEL ELEVATION NOT MEASURED
- () NOT CONTOURED
- ? — 34.0 — — — ? CONTOUR LINE OF EQUAL WATER LEVEL ELEVATION IN FEET MEAN SEA LEVEL DASHED WHERE APPROXIMATE, QUERIED WHERE INFERRED

NOTE: WATER LEVELS MEASURED DECEMBER 19, 2016



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WATER LEVEL ELEVATIONS LOWER UNIT A DECEMBER 2016



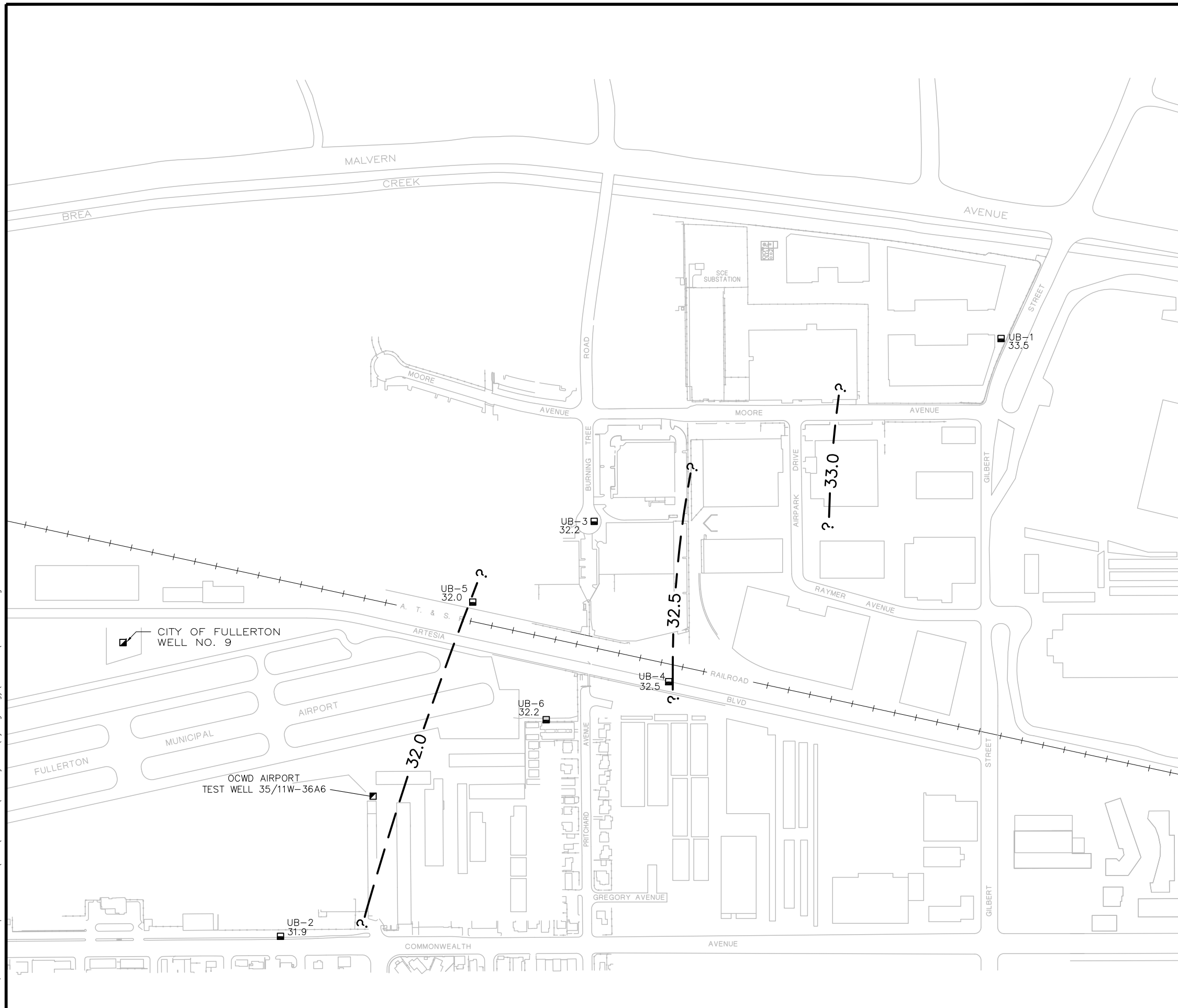
HARGIS + ASSOCIATES, INC.
Hydrogeology/Engineering

01/17

FIGURE 6

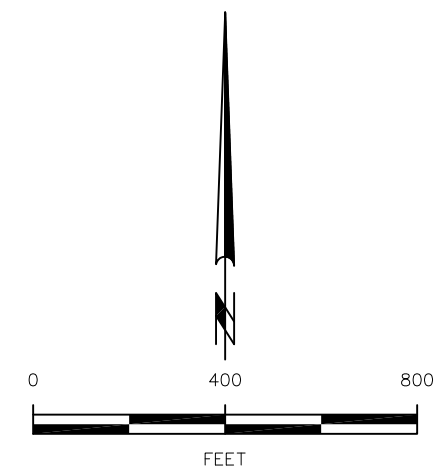
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EXPLANATION

- UB-3 APPROXIMATE LOCATION OF UNIT B MONITOR WELL
- CITY OF FULLERTON WELL No.9 APPROXIMATE LOCATION OF CITY OF FULLERTON PRODUCTION WELL
- OCWD TEST WELL 3S/11W-36A6 APPROXIMATE LOCATION OF ORANGE COUNTY WATER DISTRICT TEST WELL
- UB-1 33.5 WATER LEVEL ELEVATION IN FEET MEAN SEA LEVEL
- AT & SF RAILROAD
- ? ——— 32.0 ——— ?
 CONTOUR LINE OF EQUAL WATER LEVEL ELEVATION IN FEET MEAN SEA LEVEL
 DASHED WHERE APPROXIMATE, QUERIED WHERE INFERRED
- NOTE: WATER LEVELS MEASURED DECEMBER 19, 2016



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WATER LEVEL ELEVATIONS UNIT B DECEMBER 2016



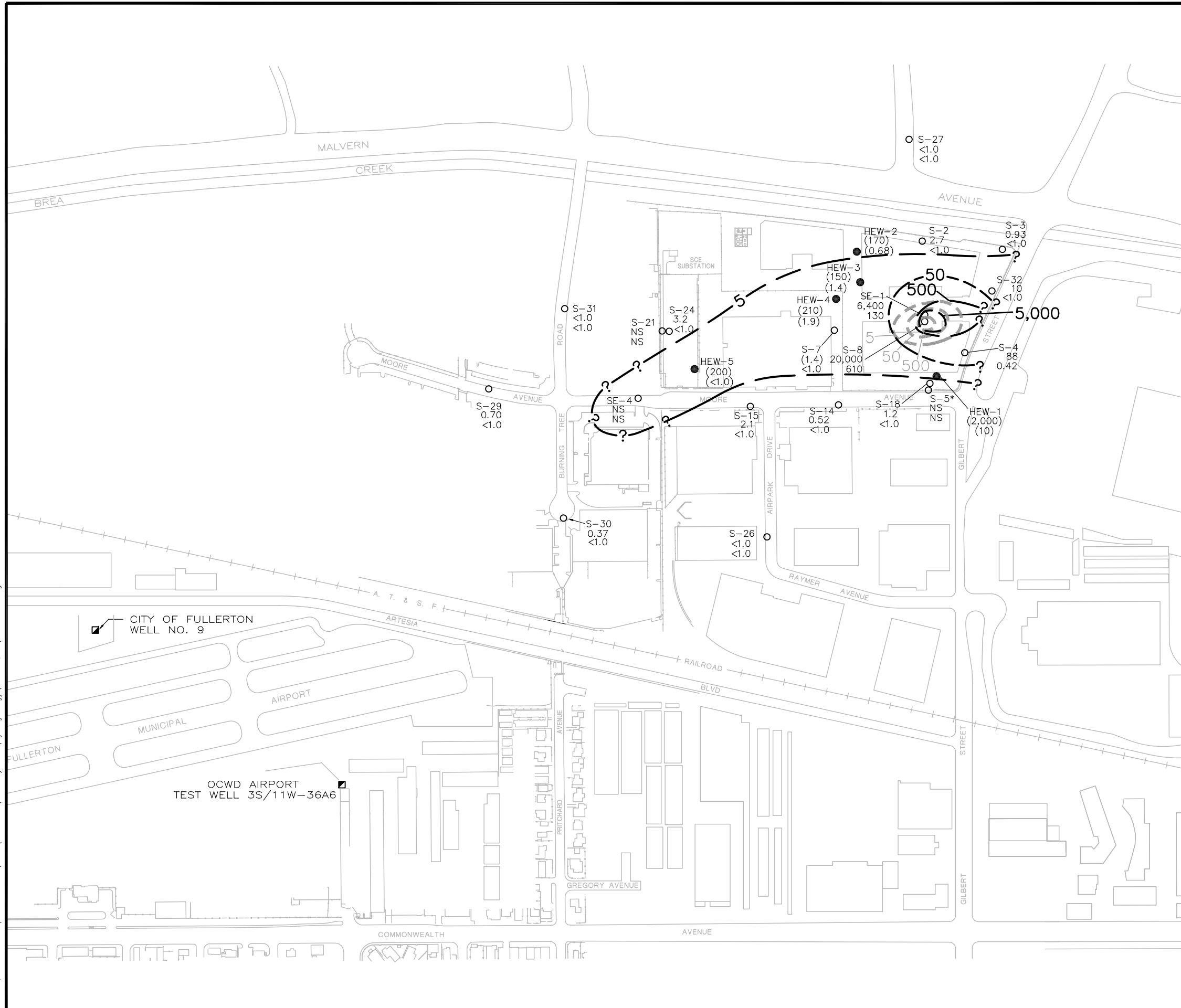
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Hydrogeology/Engineering

01/17

FIGURE 8

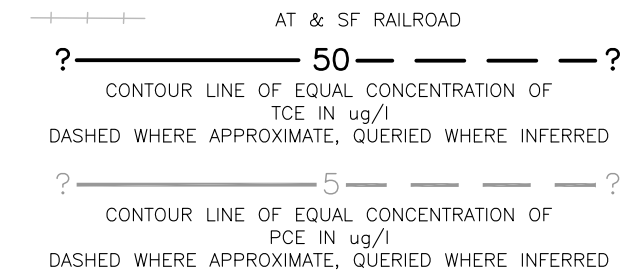
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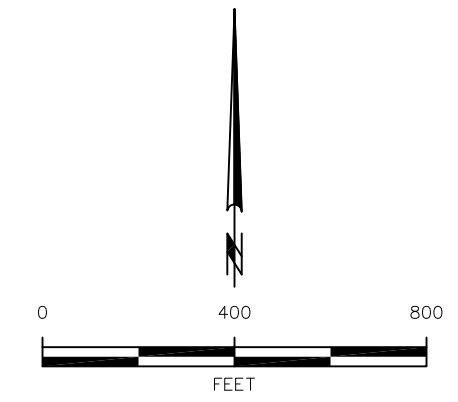


EXPLANATION

- S-29 APPROXIMATE LOCATION OF SHALLOW ZONE MONITOR WELL
- HEW-2 APPROXIMATE LOCATION OF SHALLOW ZONE HORIZONTAL EXTRACTION WELL
- (170) CONCENTRATION NOT CONTOURED
- CITY OF FULLERTON WELL No.9 APPROXIMATE LOCATION OF CITY OF FULLERTON PRODUCTION WELL
- OCWD TEST WELL 3S/11W-36A6 APPROXIMATE LOCATION OF ORANGE COUNTY WATER DISTRICT TEST WELL
- NS NOT SAMPLED
- * WELL WAS SCHEDULED TO BE SAMPLED BUT NOT SAMPLED DUE TO INSUFFICIENT VOLUME OF WATER IN THE WELL
- SE-1 6,400 CONCENTRATION OF TRICHLOROETHYLENE (TCE) IN MICROGRAMS PER LITER (ug/l)
- 130 CONCENTRATION OF TETRACHLOROETHYLENE (PCE) IN MICROGRAMS PER LITER (ug/l)
- < LESS THAN; NUMERICAL VALUE IS THE REPORTING LIMIT FOR THE SPECIFIED ANALYSIS



NOTE: GROUNDWATER SAMPLES COLLECTED DECEMBER 2016
 ANALYSES PERFORMED BY EUROFINS CALSCIENCE, INC.
 GARDEN GROVE, CALIFORNIA



RAYTHEON COMPANY
 FULLERTON, CALIFORNIA

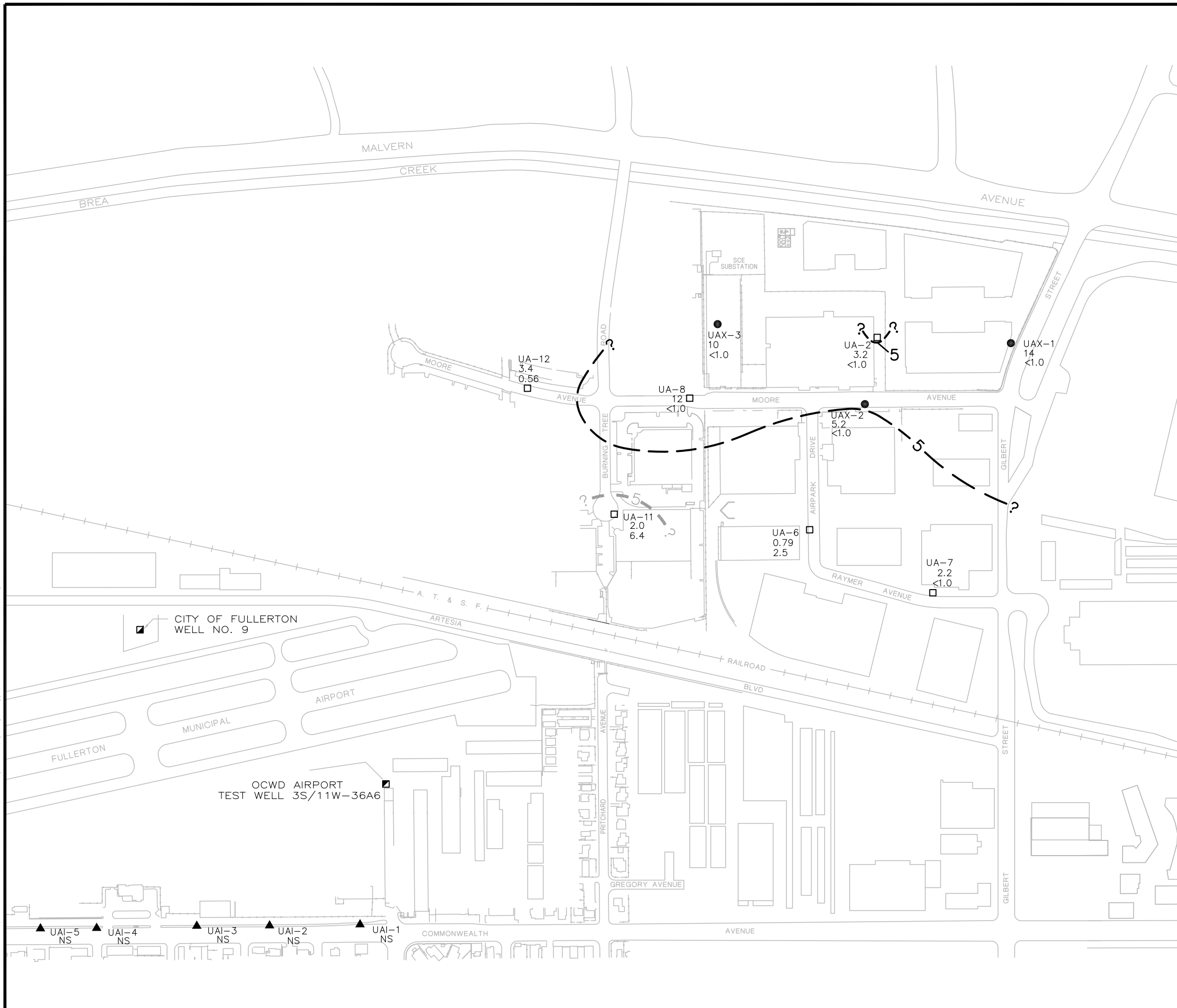
TRICHLOROETHYLENE AND TETRACHLOROETHYLENE SHALLOW ZONE, DECEMBER 2016

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 Hydrogeology/Engineering

FIGURE 9

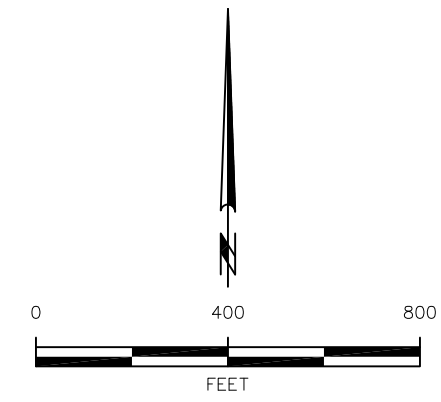
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EXPLANATION

- UA-12 APPROXIMATE LOCATION OF UPPER UNIT A MONITOR WELL
- UAX-3 APPROXIMATE LOCATION OF UPPER UNIT A EXTRACTION WELL
- ▲ UAI-2 APPROXIMATE LOCATION OF UNIT A INJECTION WELL
- CITY OF FULLERTON WELL No.9 APPROXIMATE LOCATION OF CITY OF FULLERTON PRODUCTION WELL
- OCWD TEST WELL 3S/11W-36A6 APPROXIMATE LOCATION OF ORANGE COUNTY WATER DISTRICT TEST WELL
- UA-2 3.2 CONCENTRATION OF TRICHLOROETHYLENE (TCE) IN MICROGRAMS PER LITER (ug/l)
- <1.0 CONCENTRATION OF TETRACHLOROETHYLENE (PCE) IN MICROGRAMS PER LITER (ug/l)
- < LESS THAN; NUMERICAL VALUE IS THE REPORTING LIMIT FOR THE SPECIFIED ANALYSIS
- NS NOT SAMPLED
- AT & SF RAILROAD
- ? ——— 5 ——— ? CONTOUR LINE OF EQUAL CONCENTRATION OF TCE IN ug/l
DASHED WHERE APPROXIMATE, QUERIED WHERE INFERRED
- ? ——— 5 ——— ? CONTOUR LINE OF EQUAL CONCENTRATION OF PCE IN ug/l
DASHED WHERE APPROXIMATE, QUERIED WHERE INFERRED
- NOTE: GROUNDWATER SAMPLES COLLECTED DECEMBER 2016
ANALYSES PERFORMED BY ADVANCED TECHNOLOGY LABORATORIES, INC., SIGNAL HILL, CALIFORNIA



RAYTHEON COMPANY
FULLERTON, CALIFORNIA

**TRICHLOROETHYLENE AND
TETRACHLOROETHYLENE
UPPER UNIT A, DECEMBER 2016**

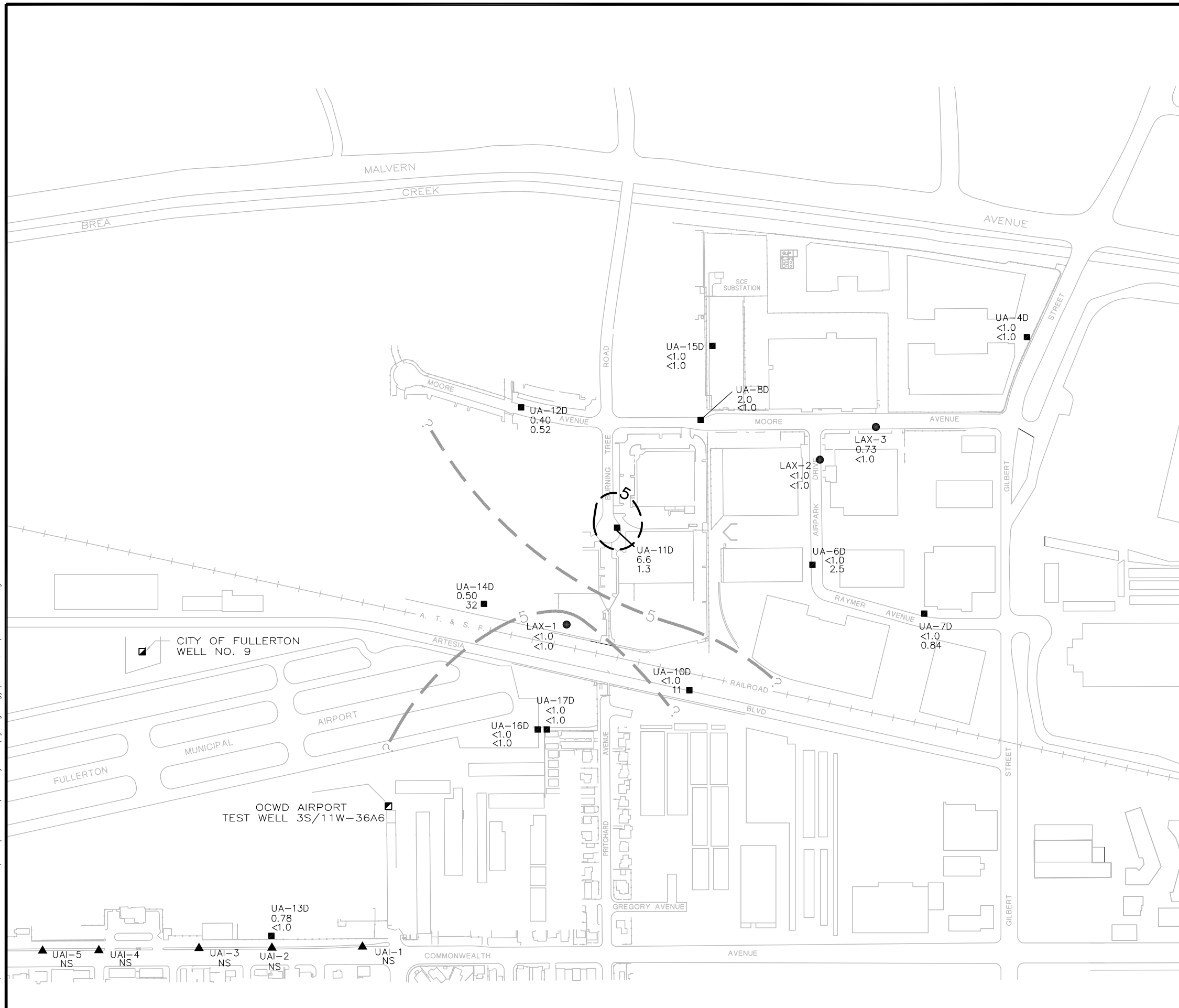

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 Hydrogeology/Engineering

01/17

FIGURE 10

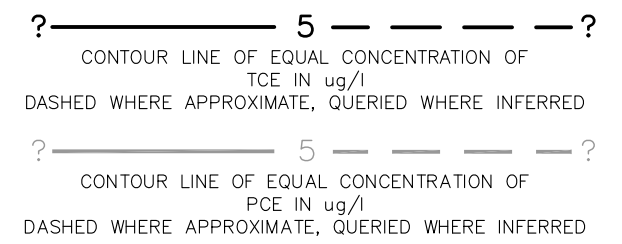
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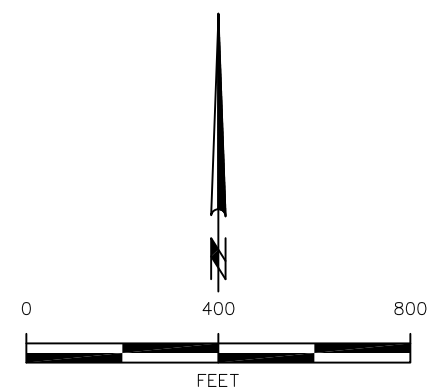


EXPLANATION

- UA-6D APPROXIMATE LOCATION OF LOWER UNIT A MONITOR WELL
- ▲ UAI-2 APPROXIMATE LOCATION OF UNIT A INJECTION WELL
- LAX-2 APPROXIMATE LOCATION OF LOWER UNIT A EXTRACTION WELL
- CITY OF FULLERTON WELL No.9 APPROXIMATE LOCATION OF CITY OF FULLERTON PRODUCTION WELL
- OCWD TEST WELL 3S/11W-36A6 APPROXIMATE LOCATION OF ORANGE COUNTY WATER DISTRICT TEST WELL
- UA-12D 0.40 CONCENTRATION OF TRICHLOROETHYLENE (TCE) IN MICROGRAMS PER LITER (ug/l)
- 0.52 CONCENTRATION OF TETRACHLOROETHYLENE (PCE) IN MICROGRAMS PER LITER (ug/l)
- < LESS THAN; NUMERICAL VALUE IS THE REPORTING LIMIT FOR THE SPECIFIED ANALYSIS
- NS NOT SAMPLED
- AT & SF RAILROAD




NOTE: GROUNDWATER SAMPLES COLLECTED DECEMBER 2016
ANALYSES PERFORMED BY EUROFINS CALSCIENCE, INC.
GARDEN GROVE, CALIFORNIA



RAYTHEON COMPANY
FULLERTON, CALIFORNIA

**TRICHLOROETHYLENE AND
TETRACHLOROETHYLENE
LOWER UNIT A, DECEMBER 2016**

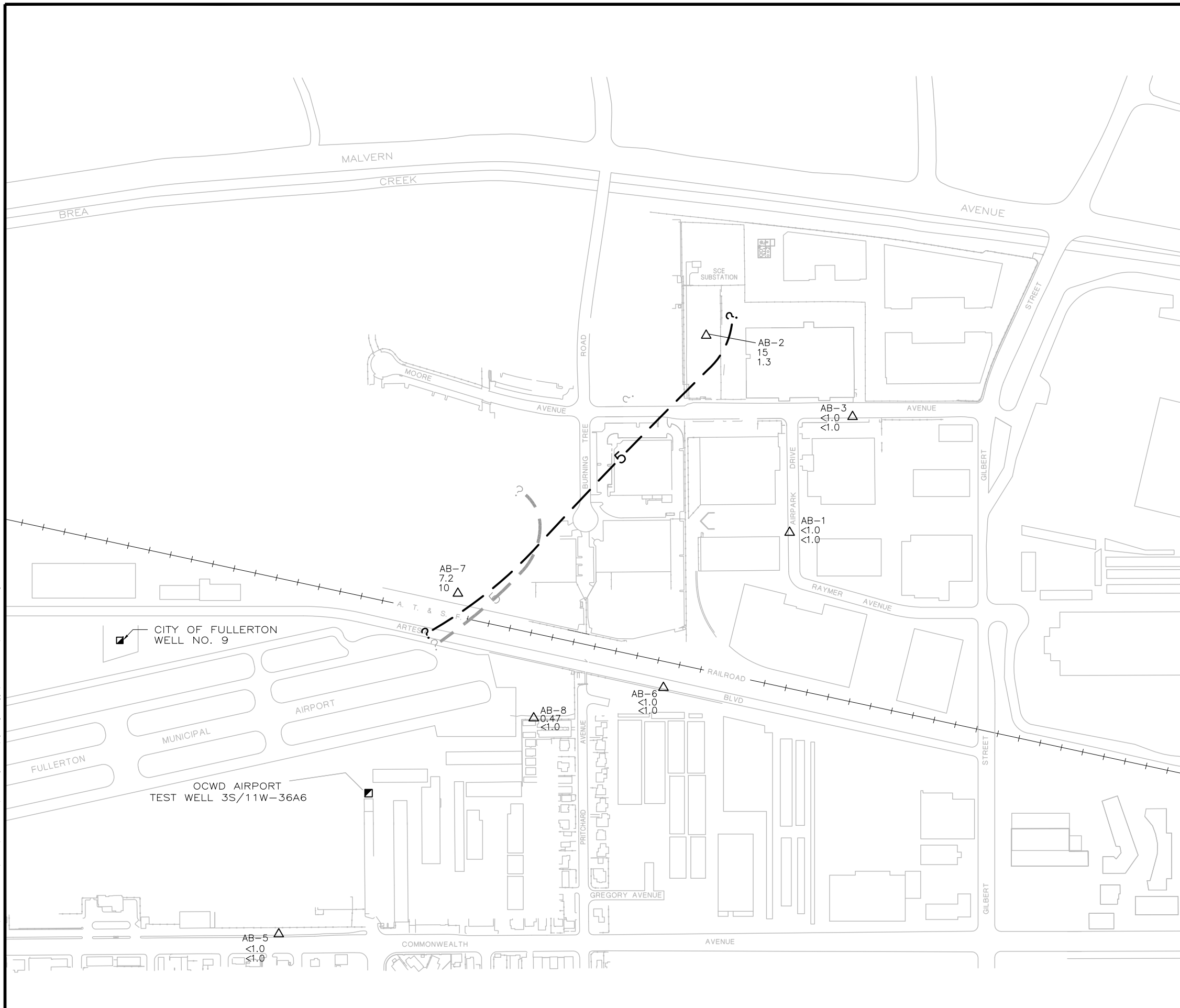

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Hydrogeology/Engineering

01/17

FIGURE 11

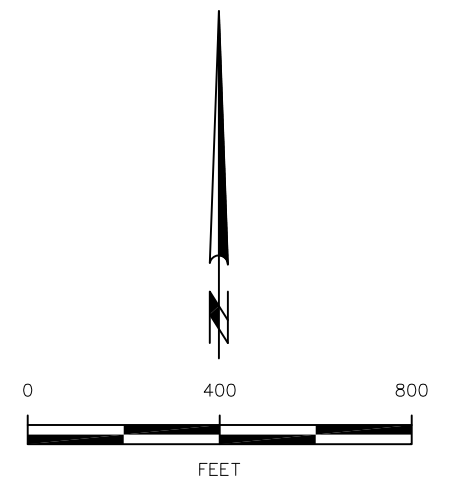
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Jan 13, 2017 - 3:12pm ess - T:\2017\700-799\764-Raytheon\Hydrogeology\Water Qual\210-4810.dwg



EXPLANATION

- △ AB-7 APPROXIMATE LOCATION OF A/B AQUITARD MONITOR WELL
 - CITY OF FULLERTON WELL No.9 APPROXIMATE LOCATION OF CITY OF FULLERTON PRODUCTION WELL
 - OCWD TEST WELL 3S/11W-36A6 APPROXIMATE LOCATION OF ORANGE COUNTY WATER DISTRICT TEST WELL
 - △ AB-7 7.2 CONCENTRATION OF TRICHLOROETHYLENE (TCE) IN MICROGRAMS PER LITER (ug/l)
 - 10 CONCENTRATION OF TETRACHLOROETHYLENE (PCE) IN MICROGRAMS PER LITER (ug/l)
 - < LESS THAN; NUMERICAL VALUE IS THE REPORTING LIMIT FOR TCE
 - AT & SF RAILROAD
 - ? — 5 — — — ? CONTOUR LINE OF EQUAL CONCENTRATION OF TCE IN ug/l
DASHED WHERE APPROXIMATE, QUERIED WHERE INFERRED
 - ? — 5 — — — ? CONTOUR LINE OF EQUAL CONCENTRATION OF PCE IN ug/l
DASHED WHERE APPROXIMATE, QUERIED WHERE INFERRED
- NOTE: GROUNDWATER SAMPLES COLLECTED DECEMBER 2016. ANALYSES PERFORMED BY EUROFINS CALSCIENCE INC., GARDEN GROVE, CALIFORNIA



RAYTHEON COMPANY
FULLERTON, CALIFORNIA

**TRICHLOROETHYLENE AND
TETRACHLOROETHYLENE
A/B AQUITARD, DECEMBER 2016**


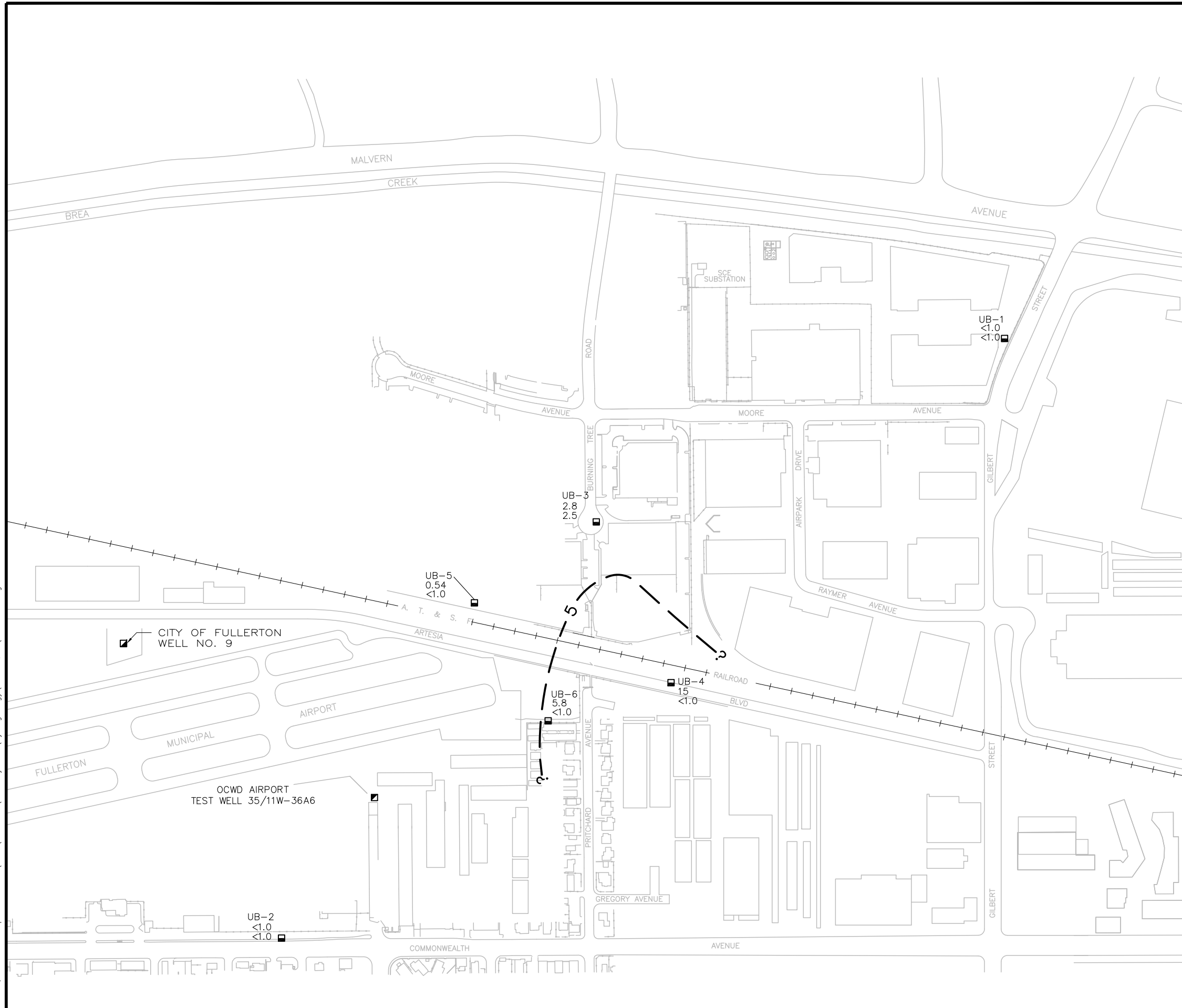

HARGIS+ASSOCIATES, INC.
Hydrogeology/Engineering
01/17

FIGURE 12

PREP BY TJE
REV BY _____
RPT NO. 764.11
210-4810
A

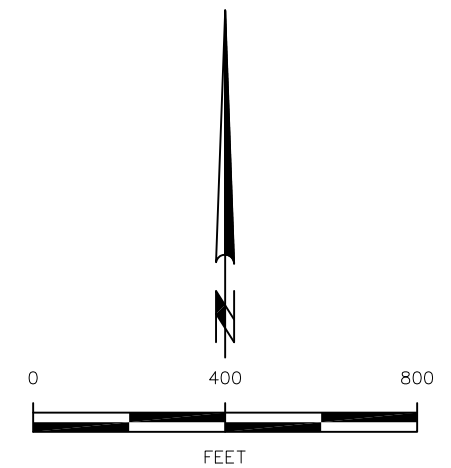
Jan 13, 2017 - 3:09pm ess - T:\2017\700-799\764-Raytheon\Hydrogeology\Water_Qual\210-4811.dwg



EXPLANATION

- UB-3 APPROXIMATE LOCATION OF UNIT B MONITOR WELL
- CITY OF FULLERTON WELL No.9 APPROXIMATE LOCATION OF CITY OF FULLERTON PRODUCTION WELL
- OCWD TEST WELL 3S/11W-36A6 APPROXIMATE LOCATION OF ORANGE COUNTY WATER DISTRICT TEST WELL
- UB-3 2.8 CONCENTRATION OF TRICHLOROETHYLENE (TCE) IN MICROGRAMS PER LITER (ug/l)
- 2.5 CONCENTRATION OF TETRACHLOROETHYLENE (PCE) IN MICROGRAMS PER LITER (ug/l)
- < LESS THAN; NUMERICAL VALUE IS THE REPORTING LIMIT FOR TCE
- AT & SF RAILROAD
- ? — 5 — — — ? CONTOUR LINE OF EQUAL CONCENTRATION OF TCE IN ug/l
DASHED WHERE APPROXIMATE, QUERIED WHERE INFERRED

NOTE: GROUNDWATER SAMPLES COLLECTED DECEMBER 2016. ANALYSES PERFORMED BY EUROFINS CALSCIENCE INC., GARDEN GROVE, CALIFORNIA



RAYTHEON COMPANY
FULLERTON, CALIFORNIA

**TRICHLOROETHYLENE AND
TETRACHLOROETHYLENE
UNIT B, DECEMBER 2016**



HARGIS+ASSOCIATES, INC.
Hydrogeology/Engineering

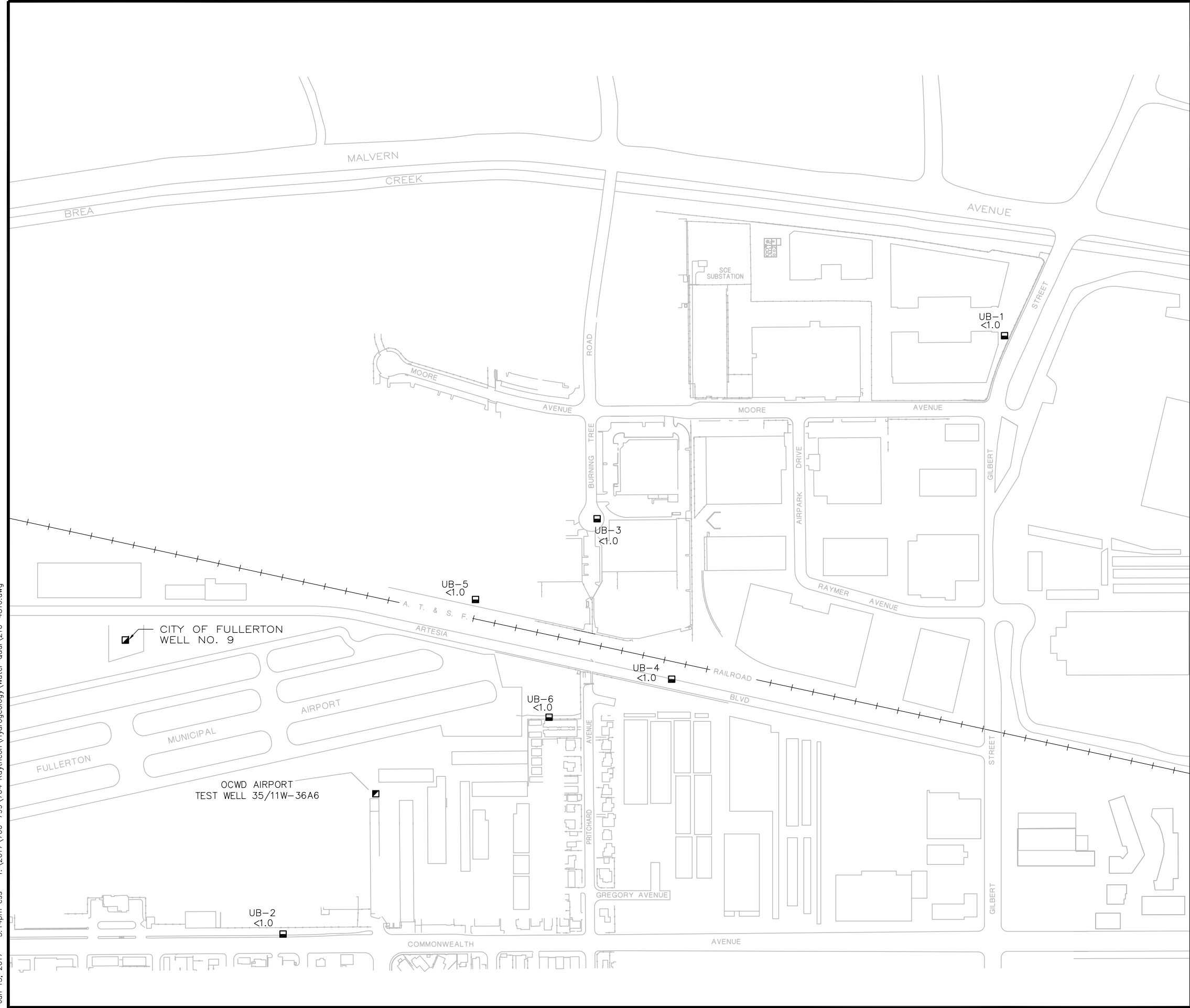
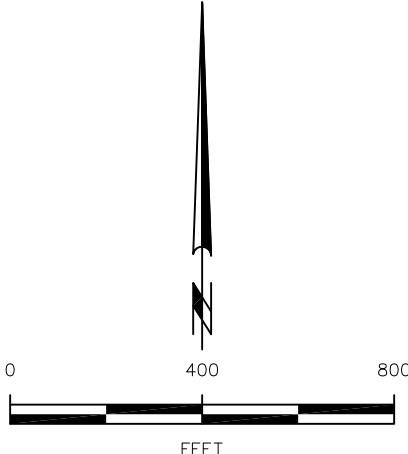
01/17

FIGURE 13

EXPLANATION

- UB-3
 APPROXIMATE LOCATION OF UNIT B MONITOR WELL
- CITY OF FULLERTON WELL No.9
 APPROXIMATE LOCATION OF CITY OF FULLERTON PRODUCTION WELL
- OCWD TEST WELL 3S/11W-36A6
 APPROXIMATE LOCATION OF ORANGE COUNTY WATER DISTRICT TEST WELL
- UB-1 <1.0
 CONCENTRATION OF 1,1-DICHLOROETHYLENE (1,1-DCE) IN MICROGRAMS PER LITER (ug/l)
- <
 LESS THAN; NUMERICAL VALUE IS THE REPORTING LIMIT FOR 1,1-DCE
- AT & SF RAILROAD

NOTE: GROUNDWATER SAMPLES COLLECTED DECEMBER 2016. ANALYSES PERFORMED BY EUROFINS CALSCIENCE, INC., GARDEN GROVE, CALIFORNIA.



RAYTHEON COMPANY FULLERTON, CALIFORNIA			
1,1-DICHLOROETHYLENE UNIT B DECEMBER 2016			
	HARGIS + ASSOCIATES, INC. Hydrogeology/Engineering	01/17	
FIGURE 18			
PREP BY TJE	REV BY _____	RPT NO. 764.11	210-4816 A

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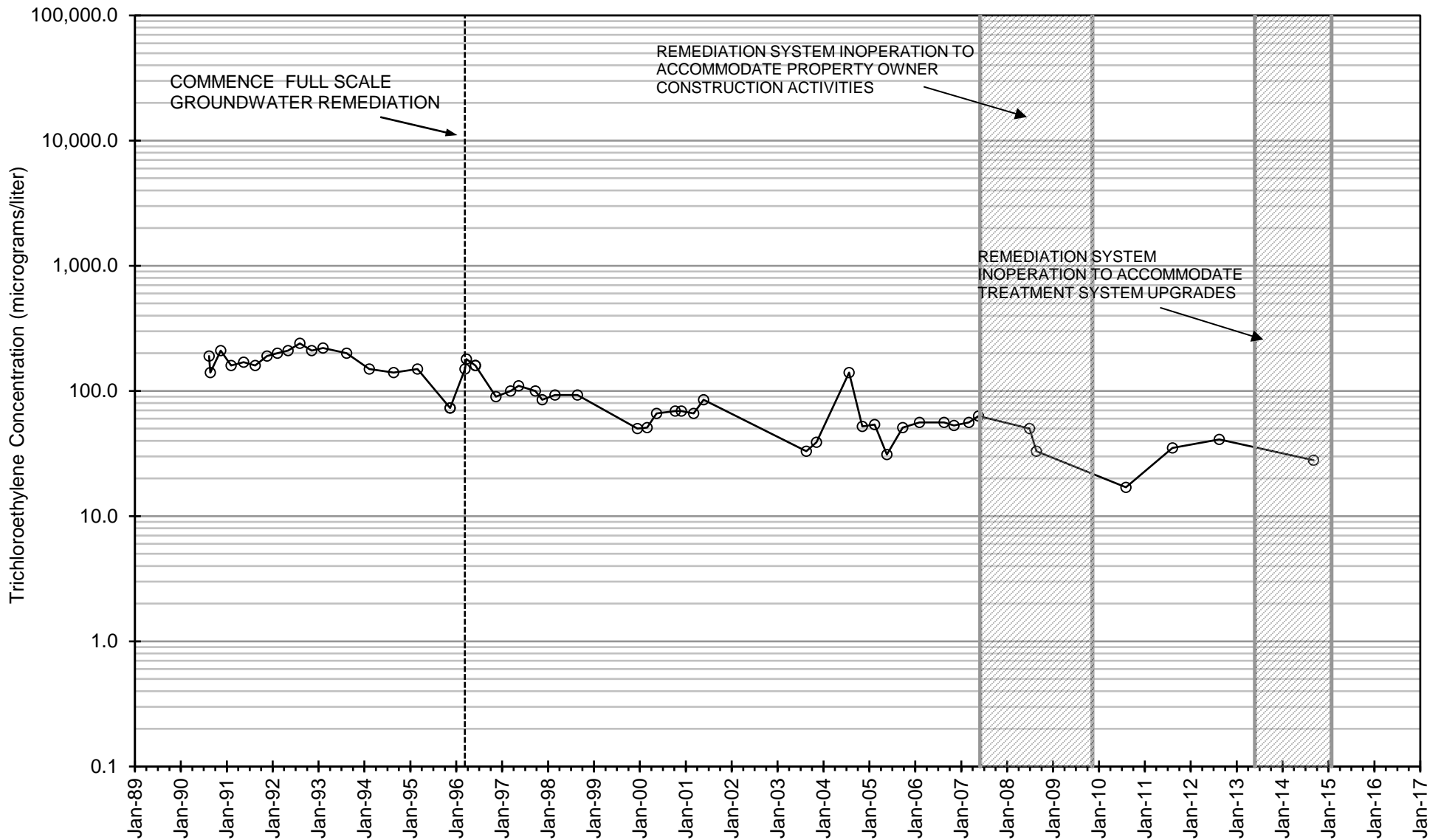


FIGURE 19. TRICHLOROETHYLENE CONCENTRATIONS IN EXTRACTION WELL SE-04

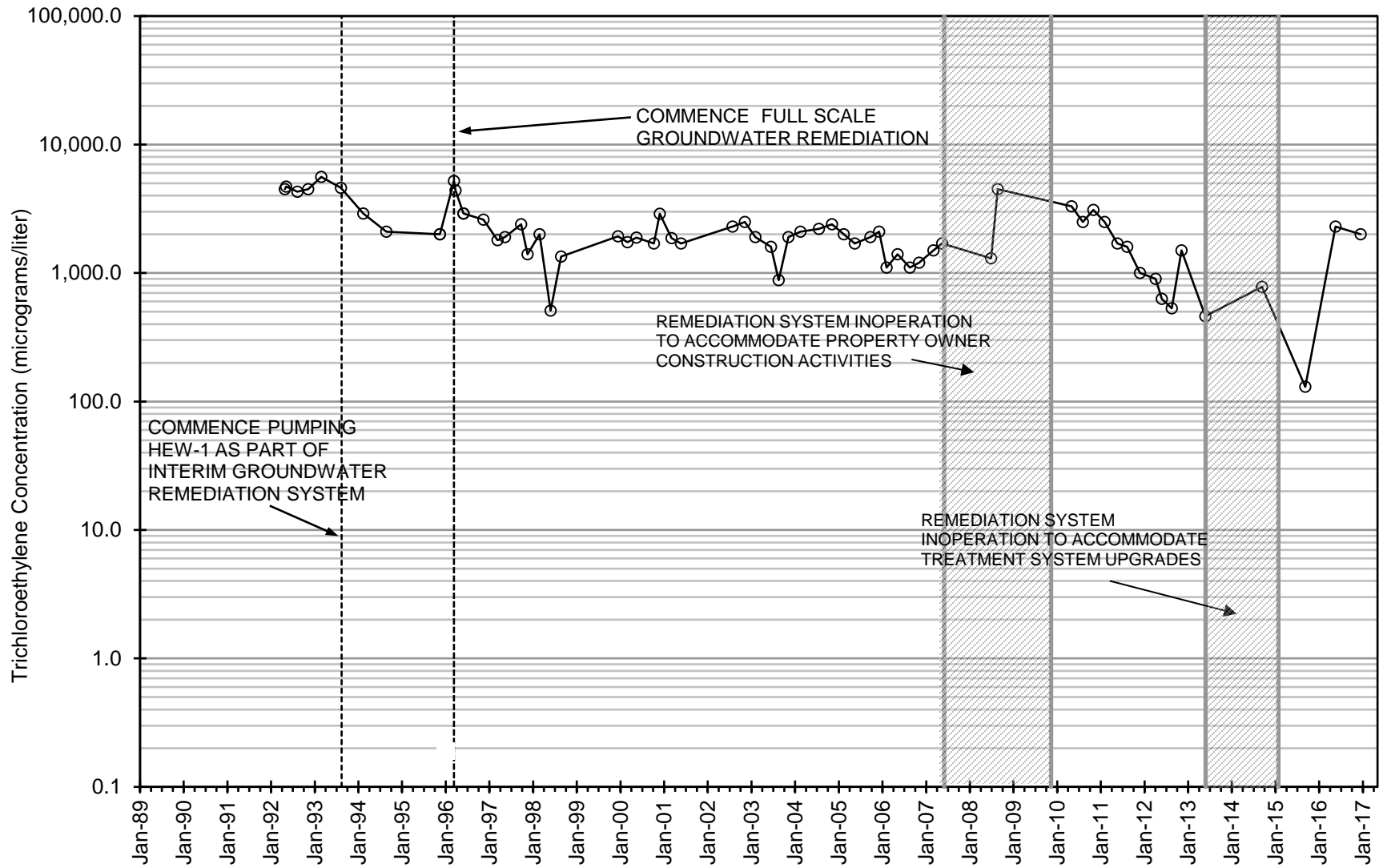


FIGURE 20. TRICHLOROETHYLENE CONCENTRATIONS IN EXTRACTION WELL HEW-01

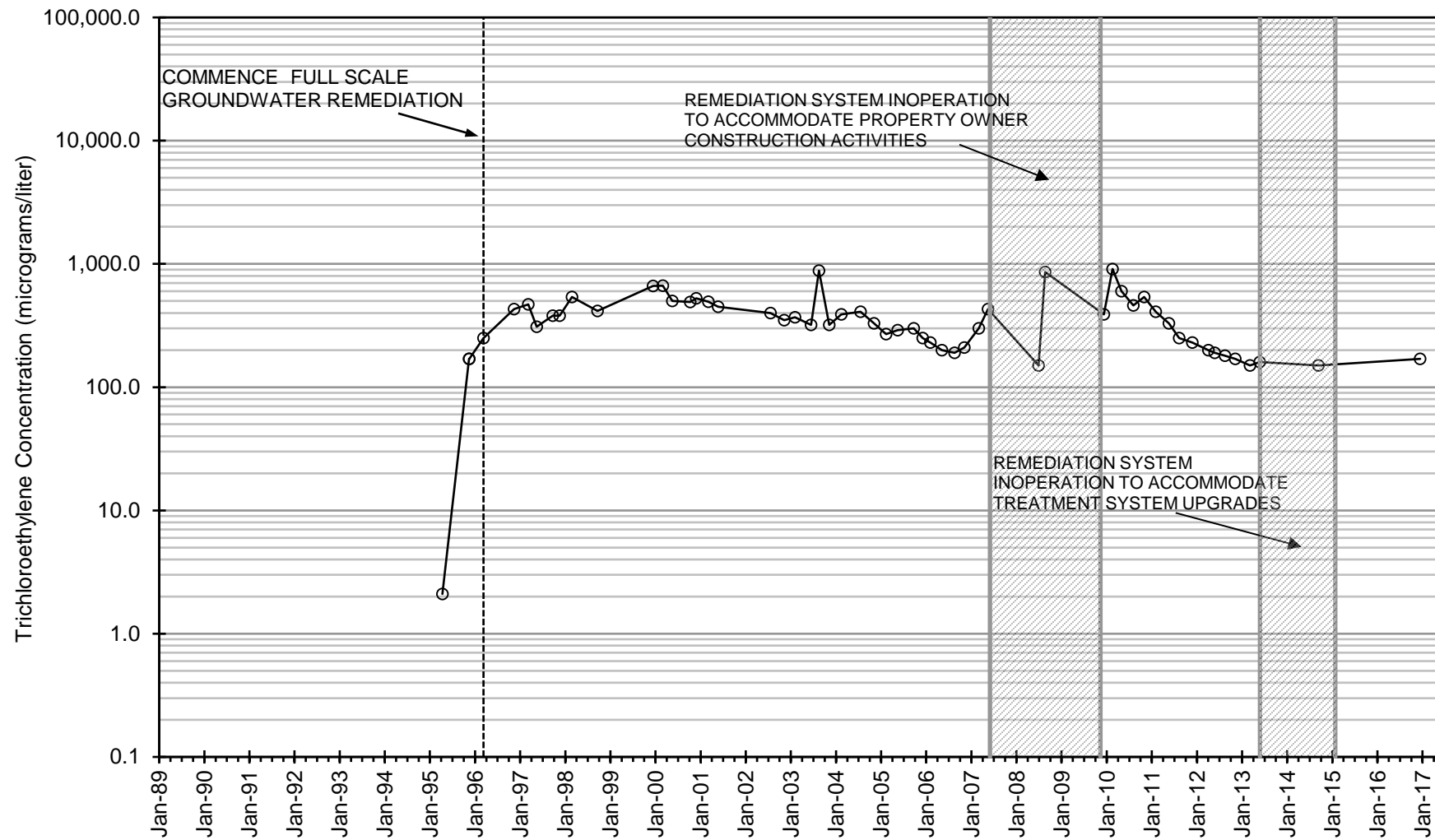


FIGURE 21. TRICHLOROETHYLENE CONCENTRATIONS IN EXTRACTION WELL HEW-02

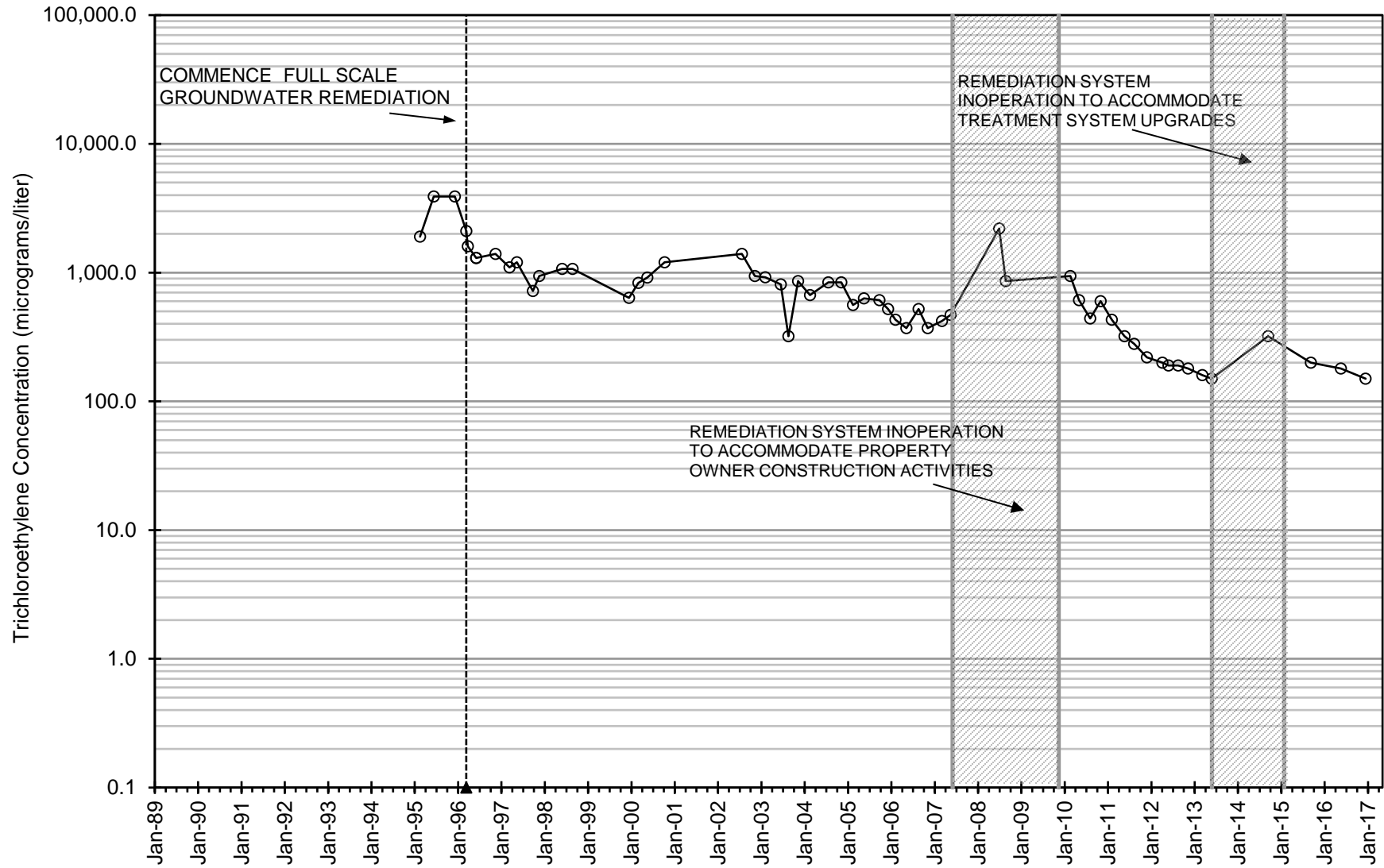


FIGURE 22. TRICHLOROETHYLENE CONCENTRATIONS IN EXTRACTION WELL HEW-03

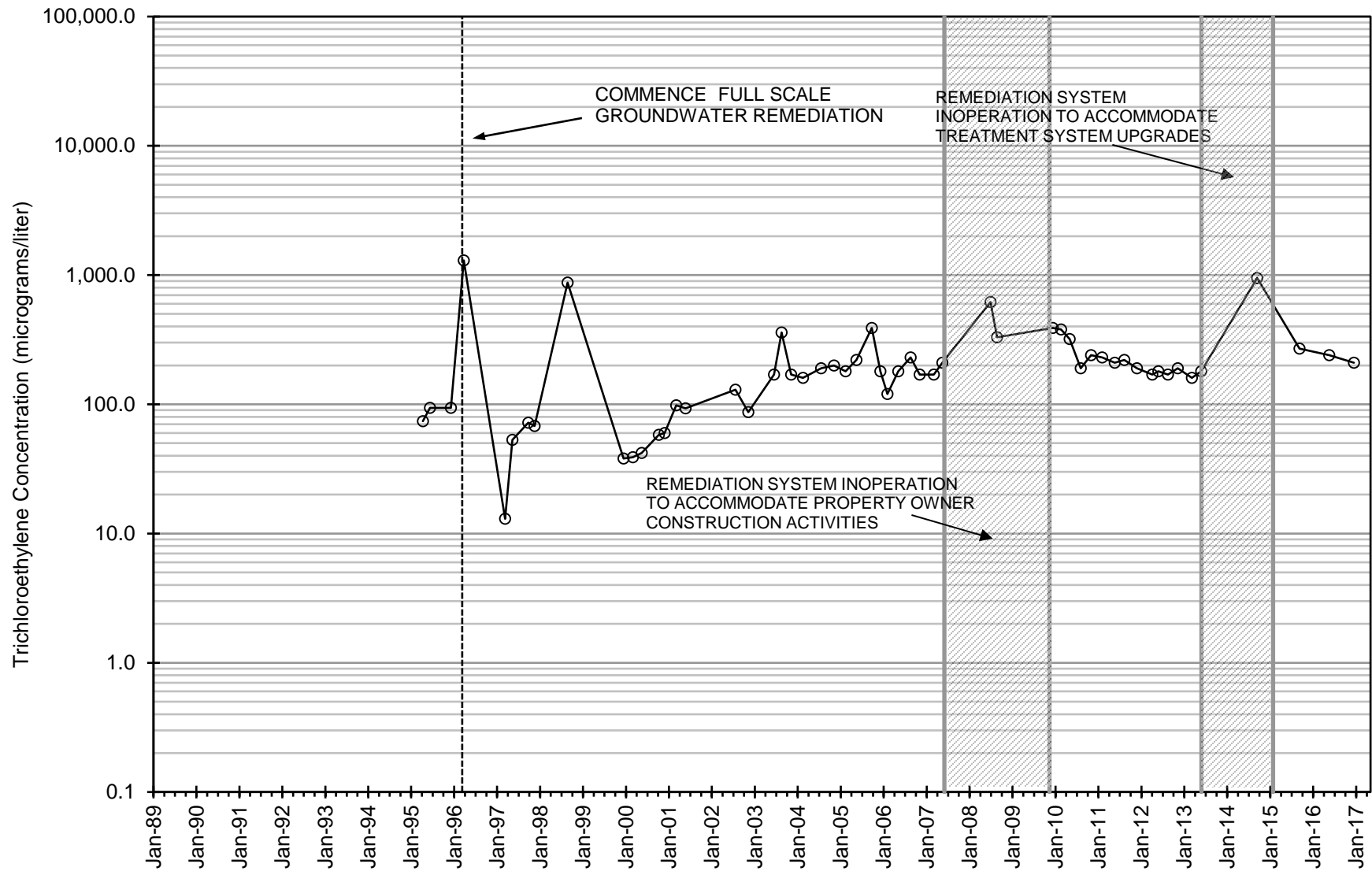


FIGURE 23. TRICHLOROETHYLENE CONCENTRATIONS IN EXTRACTION WELL HEW-04

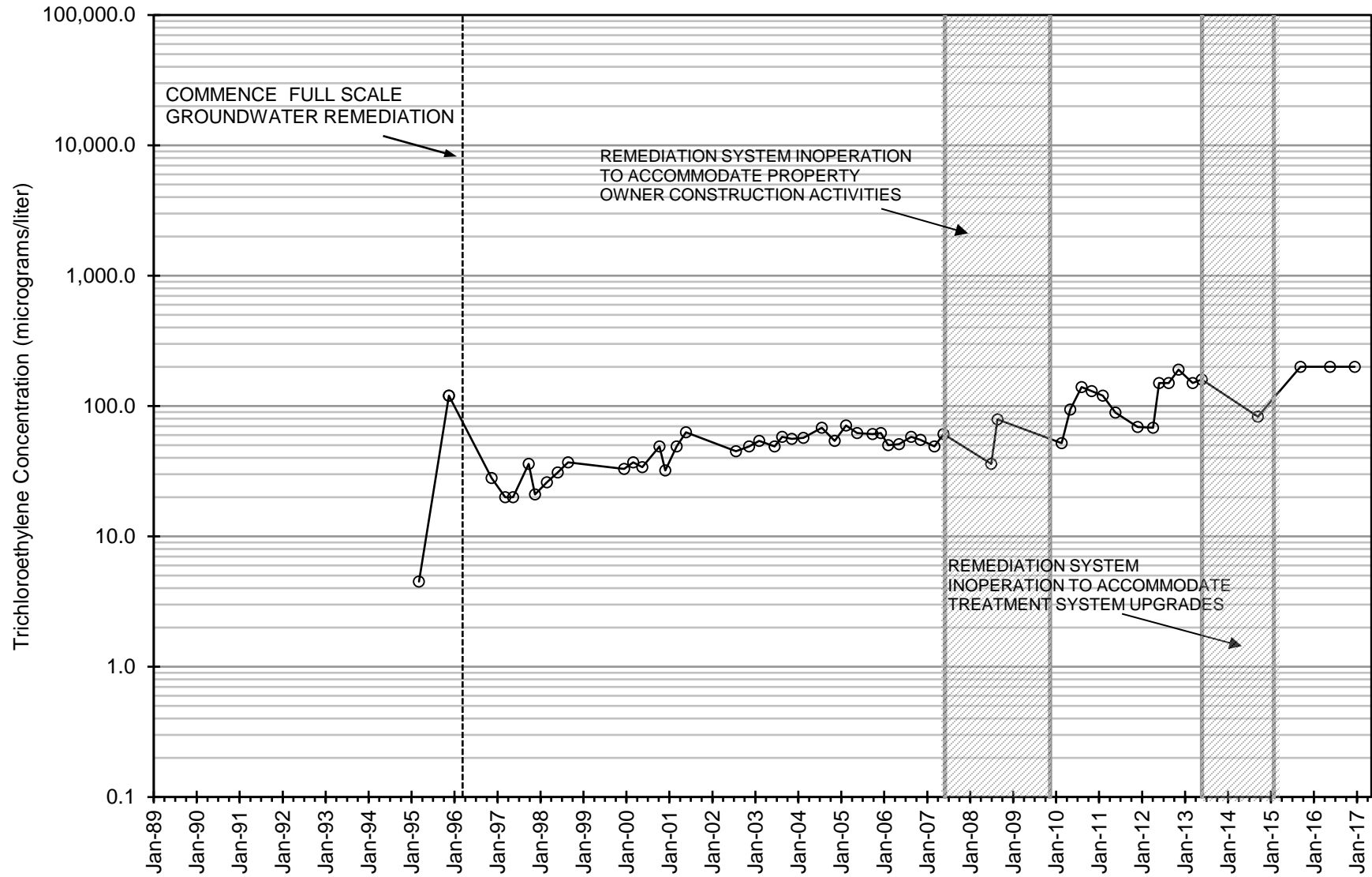


FIGURE 24. TRICHLOROETHYLENE CONCENTRATIONS IN EXTRACTION WELL HEW-05

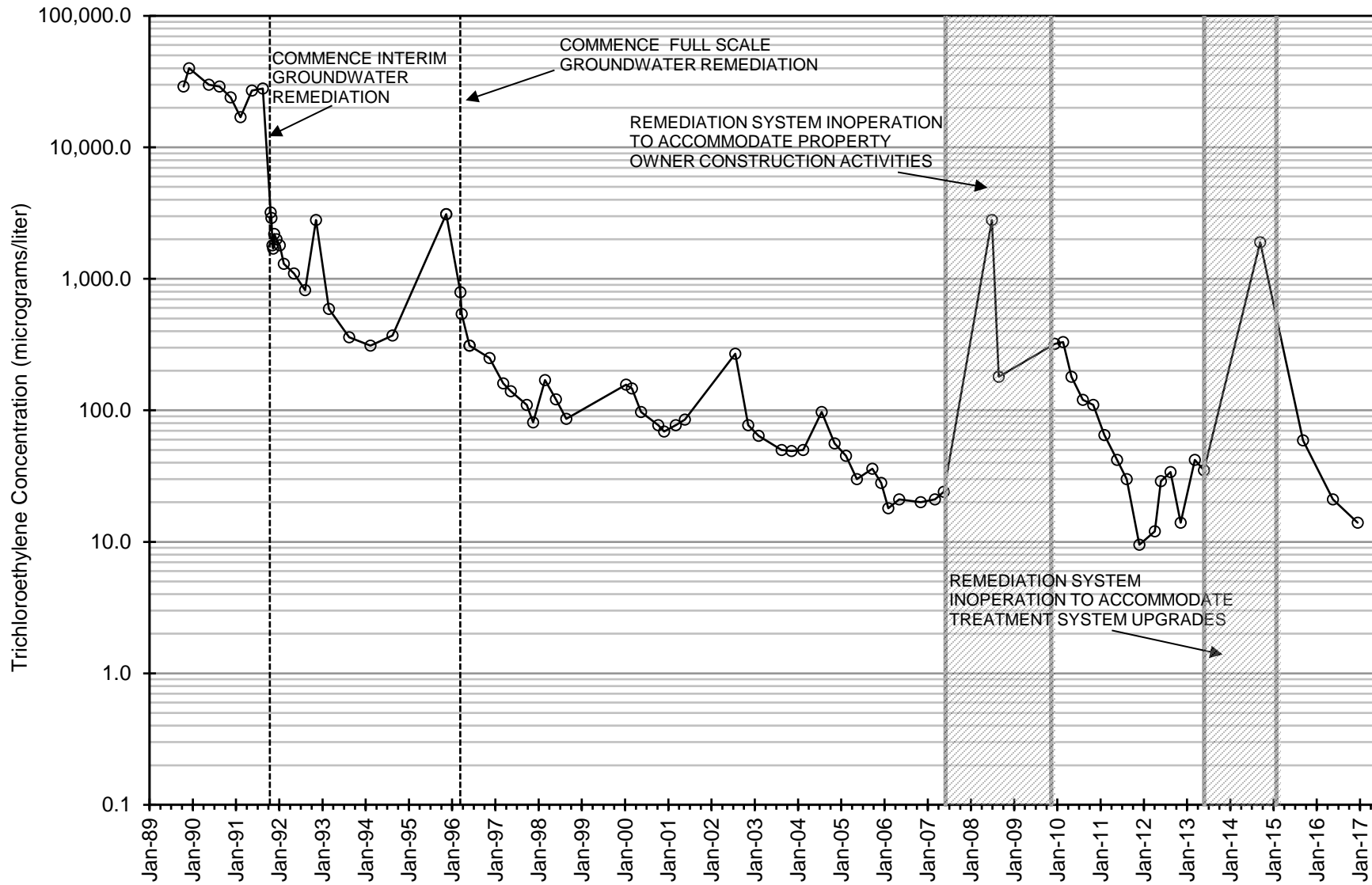


FIGURE 25. TRICHLOROETHYLENE CONCENTRATIONS IN EXTRACTION WELL UAX-01

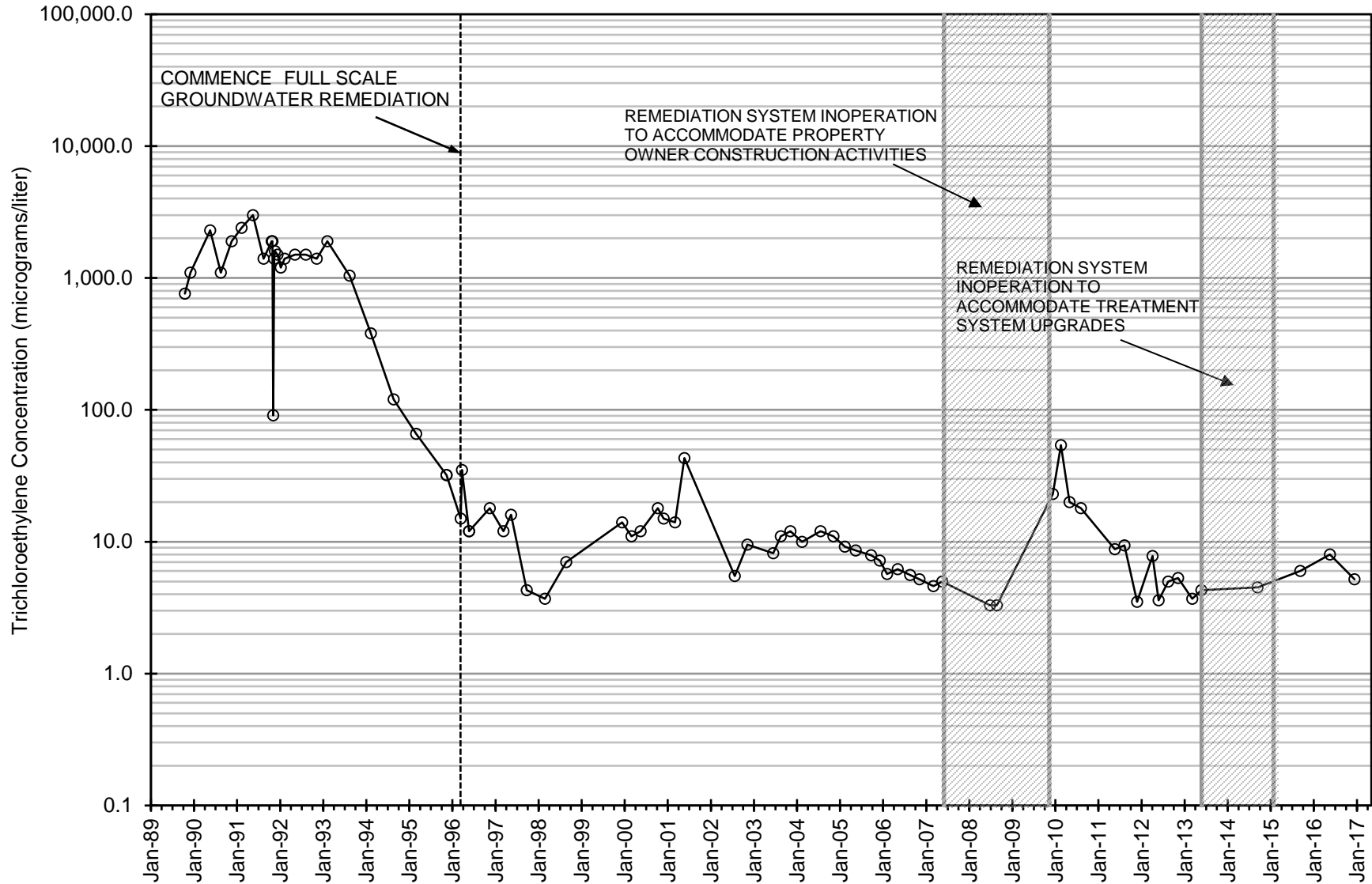


FIGURE 26. TRICHLOROETHYLENE CONCENTRATIONS IN EXTRACTION WELL UAX-02

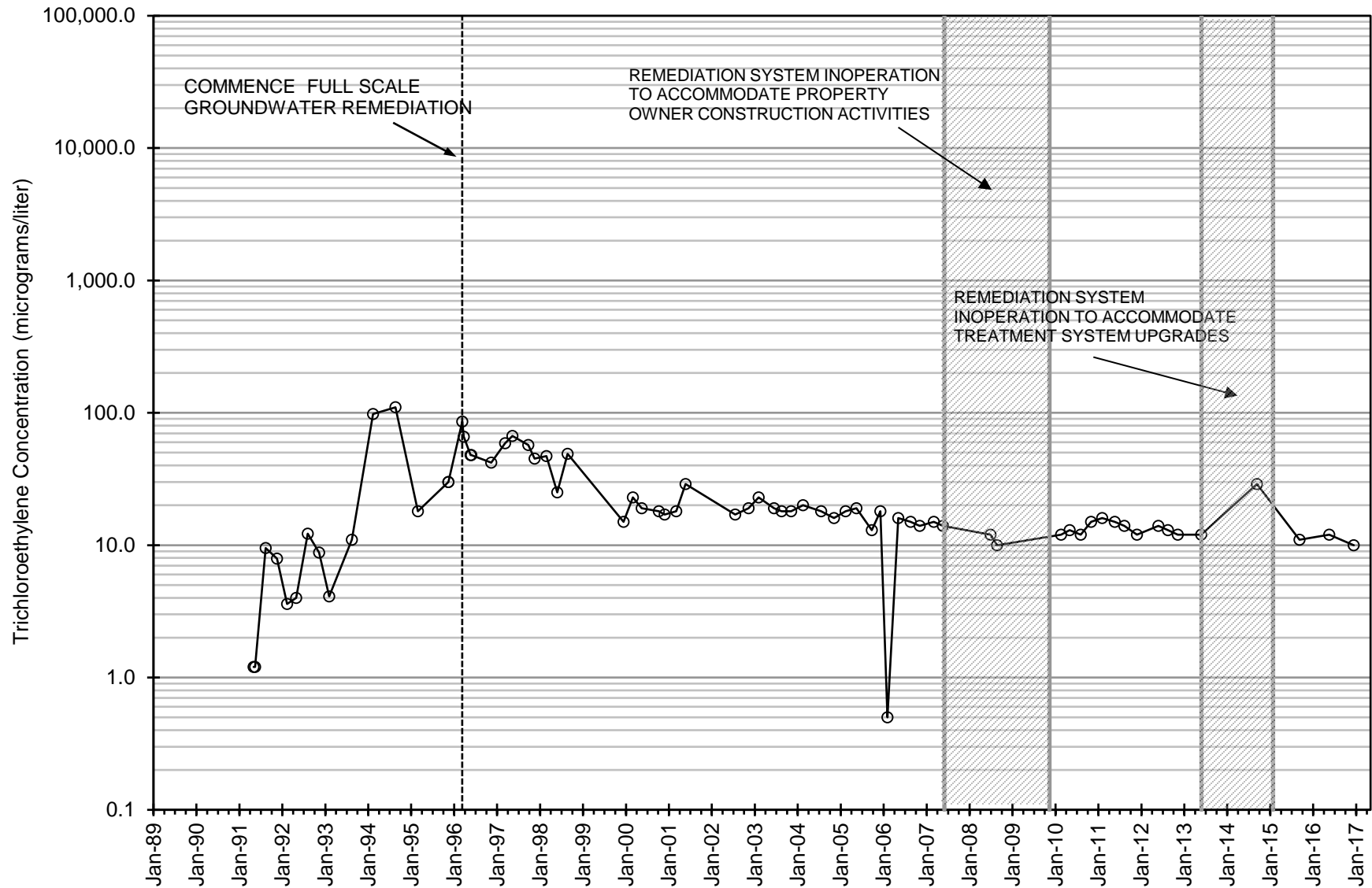


FIGURE 27. TRICHLOROETHYLENE CONCENTRATIONS IN EXTRACTION WELL UAX-03

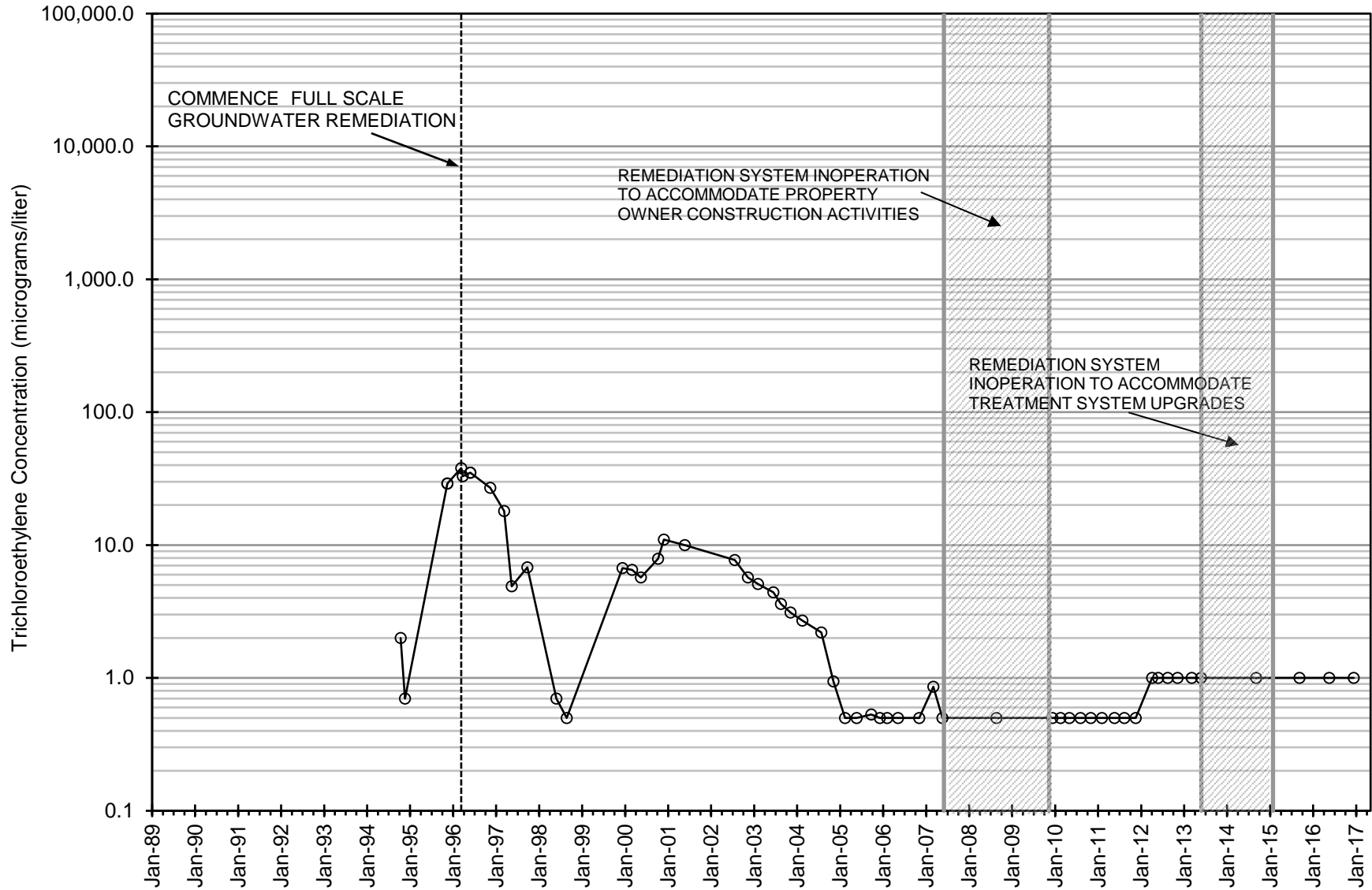


FIGURE 28. TRICHLOROETHYLENE CONCENTRATIONS IN EXTRACTION WELL LAX-01

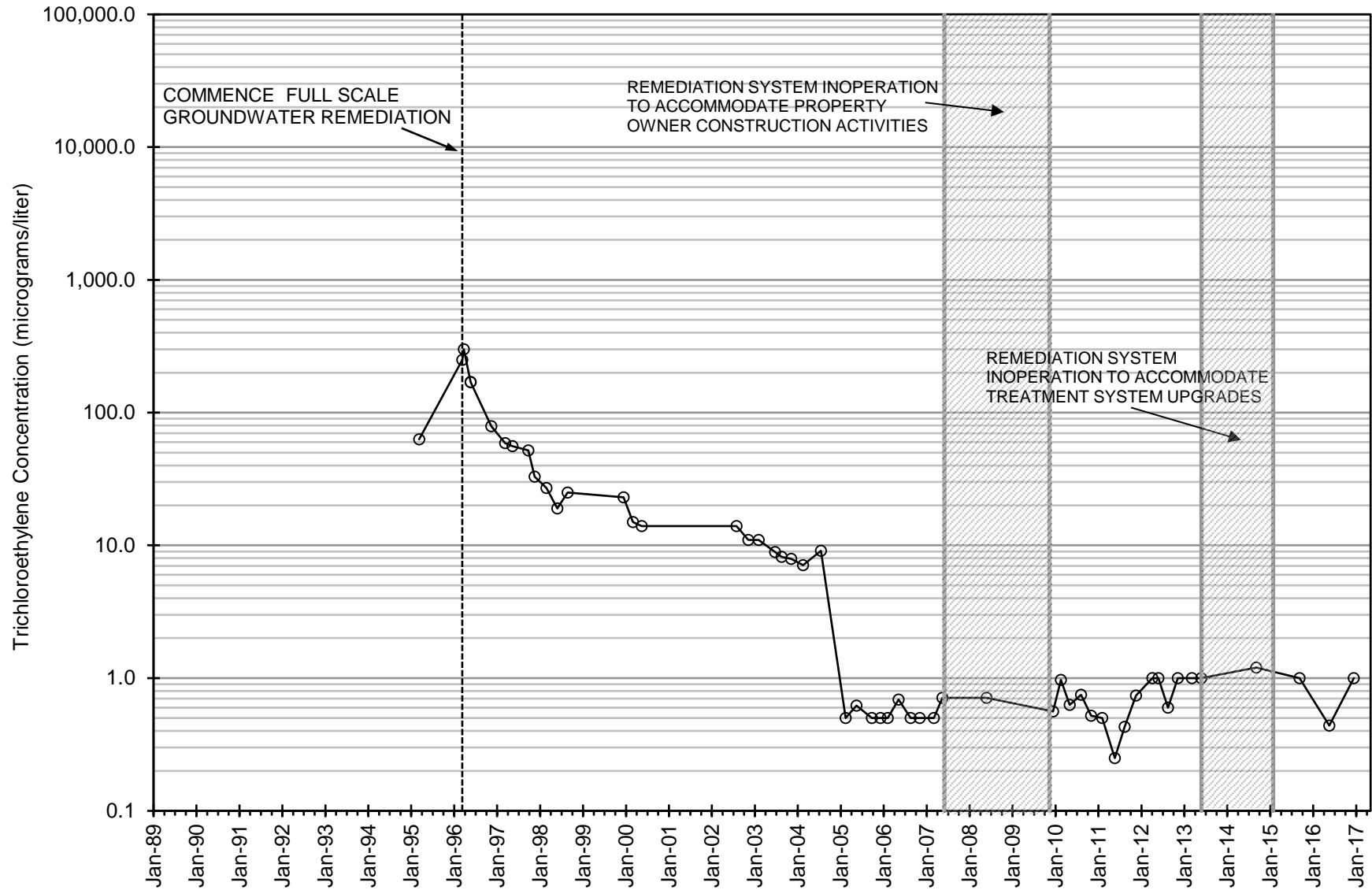


FIGURE 29. TRICHLOROETHYLENE CONCENTRATIONS IN EXTRACTION WELL LAX-02

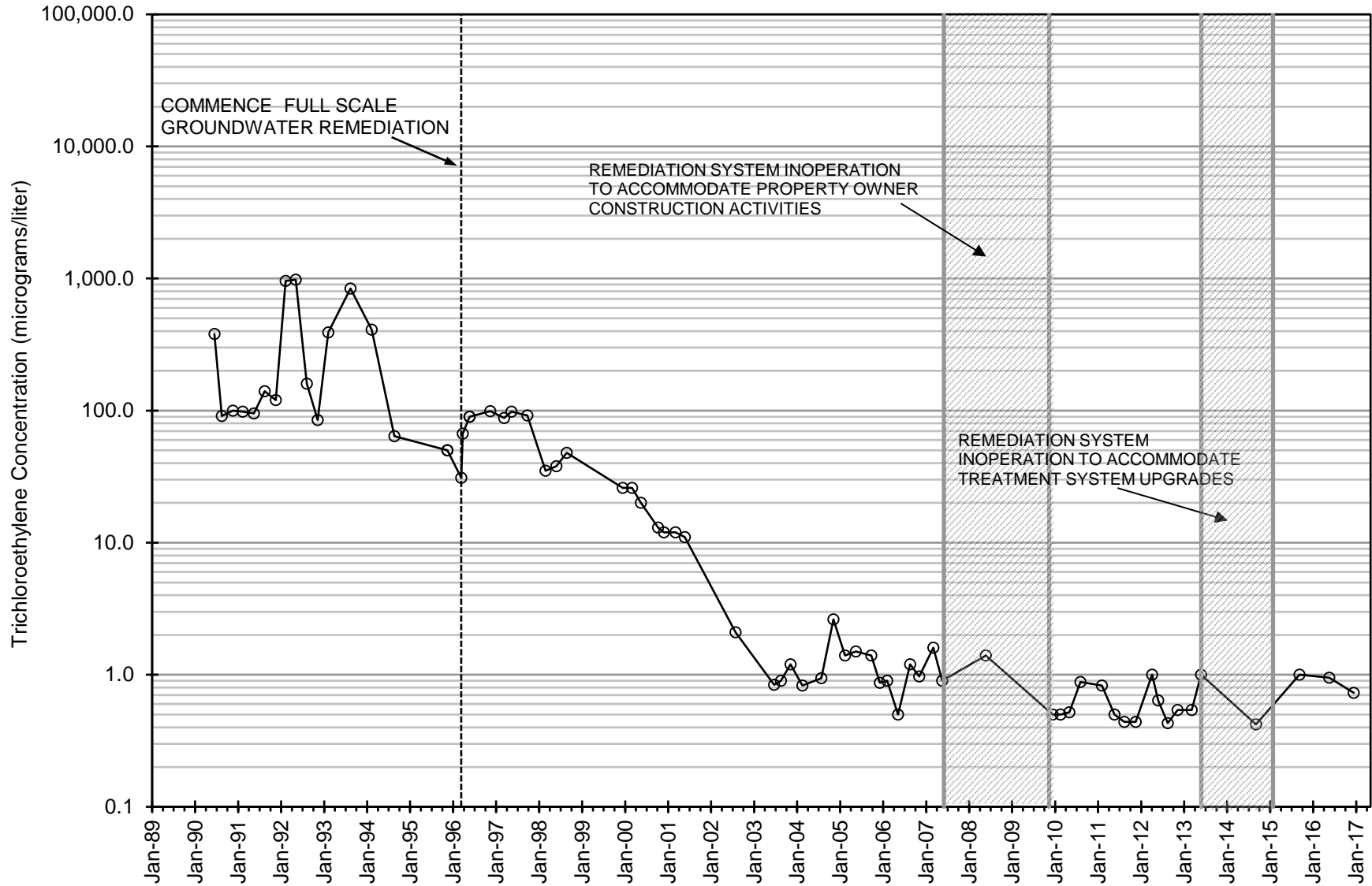


FIGURE 30. TRICHLOROETHYLENE CONCENTRATIONS IN EXTRACTION WELL LAX-03

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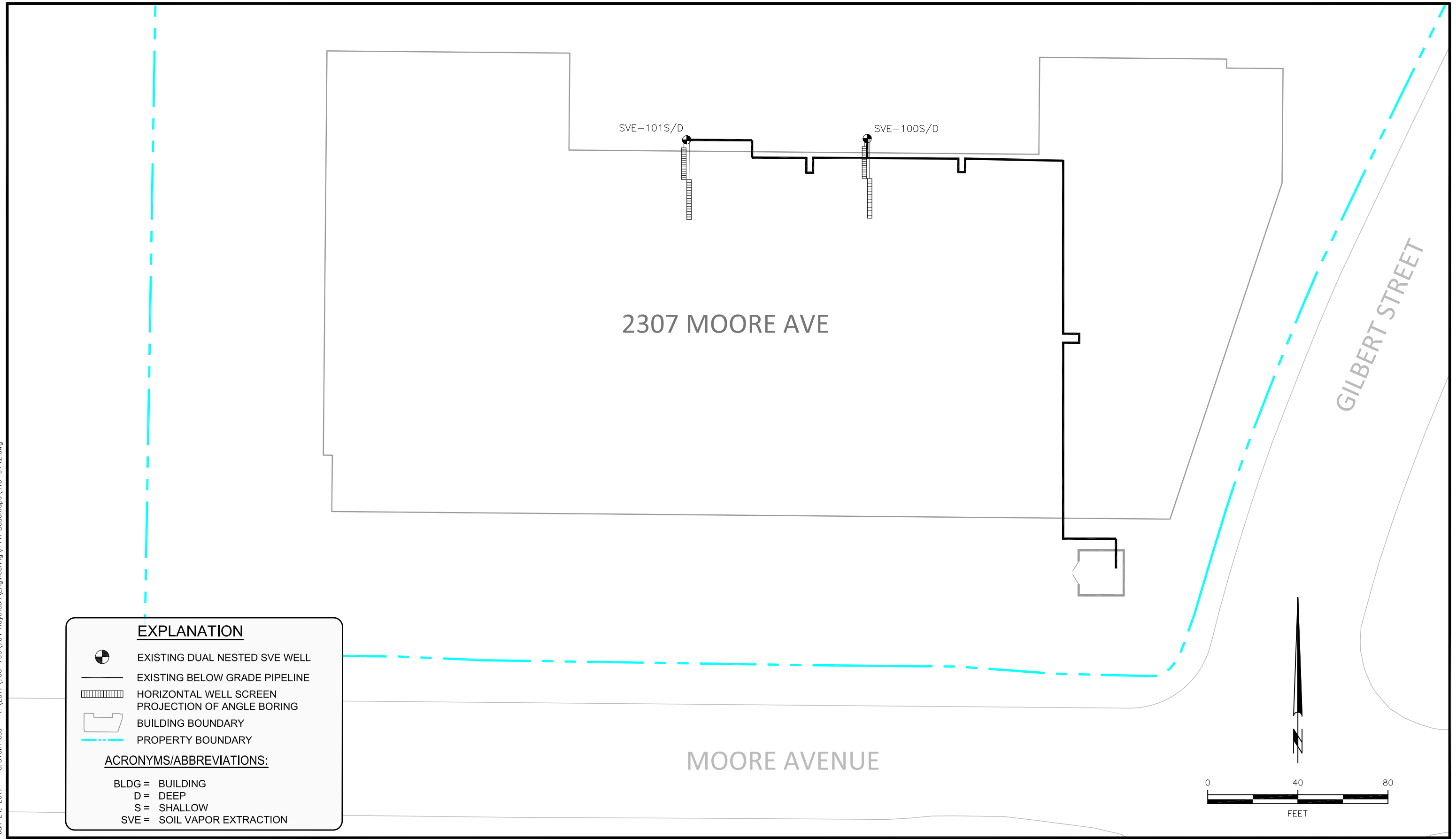


FIG 31. SITE PLAN
FORMER BUILDING 684 SVE SYSTEM, FULLERTON CALIFORNIA

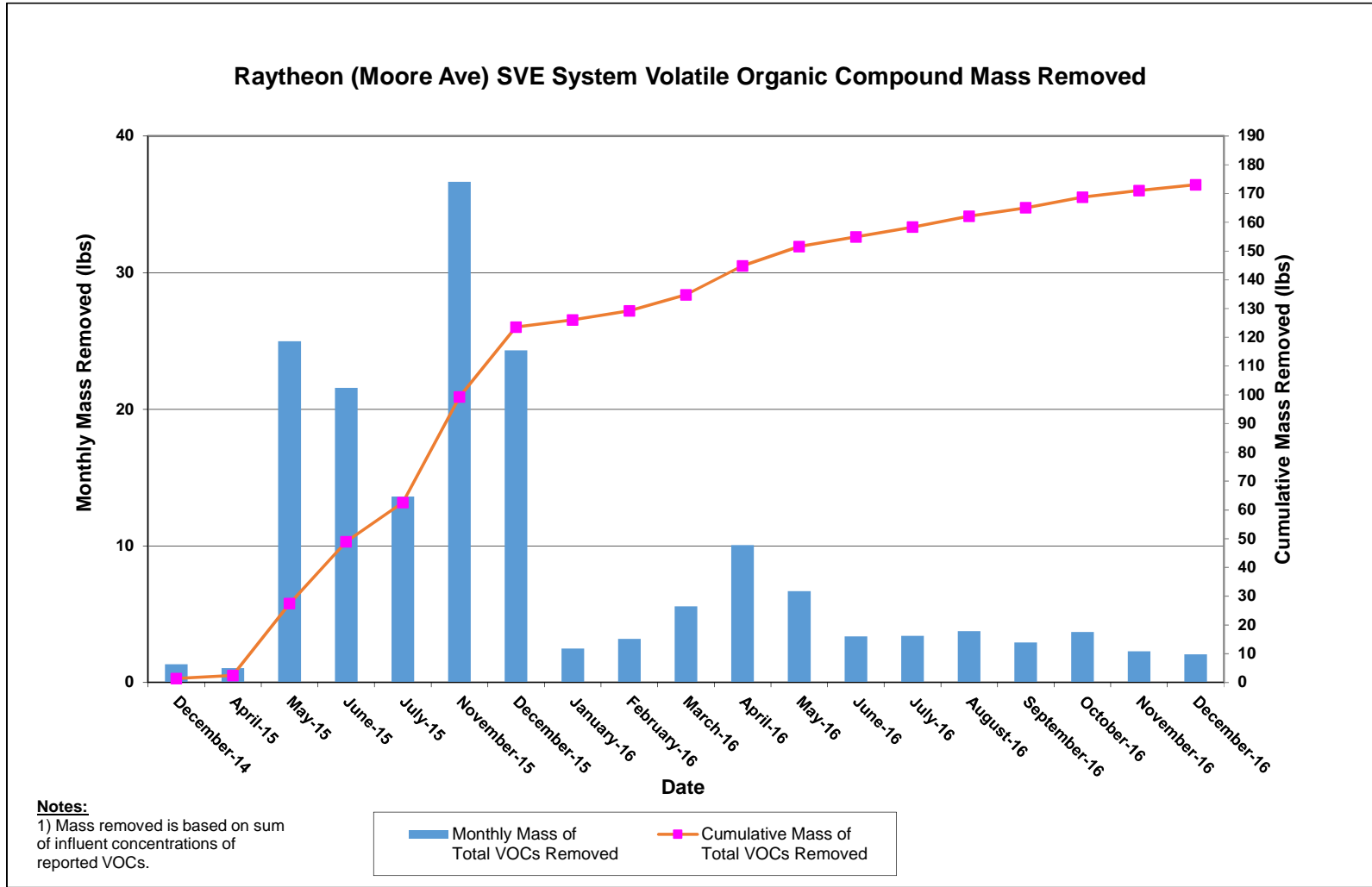


FIGURE 32. SVE SYSTEM CUMULATIVE VOC MASS REMOVED

APPENDIX A
LABORATORY ANALYTICAL DATA



WORK ORDER NUMBER: 16-05-1837

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: Hargis + Associates, Inc.

Client Project Name: Building 684 - Raytheon / 764.10

Attention: Ken Puentes
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Approved for release on 06/02/2016 by:
Virendra Patel
Project Manager

ResultLink ▶

Email your PM ▶



Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

Contents

Client Project Name: Building 684 - Raytheon / 764.10
Work Order Number: 16-05-1837

1	Work Order Narrative.	3
2	Sample Summary.	4
3	Detections Summary.	5
4	Client Sample Data.	6
	4.1 EPA 8260B Volatile Organics (Aqueous).	6
5	Quality Control Sample Data.	36
	5.1 MS/MSD.	36
	5.2 LCS/LCSD.	37
6	Sample Analysis Summary.	39
7	Glossary of Terms and Qualifiers.	40
8	Chain-of-Custody/Sample Receipt Form.	41

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 05/25/16. They were assigned to Work Order 16-05-1837.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

Sample Summary

Client: Hargis + Associates, Inc.	Work Order: 16-05-1837
9171 Towne Centre Drive, Suite 375	Project Name: Building 684 - Raytheon / 764.10
San Diego, CA 92122-6215	PO Number:
	Date/Time Received: 05/25/16 14:00
	Number of Containers: 40

Attn: Ken Puentes

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
TB-052416	16-05-1837-1	05/24/16 08:00	2	Aqueous
LAX-01	16-05-1837-2	05/24/16 09:50	3	Aqueous
LAX-02	16-05-1837-3	05/25/16 09:20	3	Aqueous
LAX-03	16-05-1837-4	05/24/16 09:45	3	Aqueous
UAX-01	16-05-1837-5	05/24/16 14:30	3	Aqueous
UAX-02	16-05-1837-6	05/24/16 13:30	5	Aqueous
UAX-03	16-05-1837-7	05/24/16 12:35	3	Aqueous
HEW-01	16-05-1837-8	05/24/16 13:50	3	Aqueous
HEW-0100	16-05-1837-9	05/24/16 14:00	3	Aqueous
HEW-03	16-05-1837-10	05/24/16 14:20	3	Aqueous
HEW-04	16-05-1837-11	05/24/16 12:45	3	Aqueous
HEW-05	16-05-1837-12	05/24/16 12:15	3	Aqueous
RB-052516	16-05-1837-13	05/25/16 10:00	3	Aqueous

Detections Summary

Client: Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Work Order: 16-05-1837
 Project Name: Building 684 - Raytheon / 764.10
 Received: 05/25/16

Attn: Ken Puentes

Page 1 of 1

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
LAX-02 (16-05-1837-3)						
Trichloroethene	0.44	J	0.37*	ug/L	EPA 8260B	EPA 5030C
LAX-03 (16-05-1837-4)						
1,1-Dichloroethene	1.6		1.0	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	0.95	J	0.37*	ug/L	EPA 8260B	EPA 5030C
UAX-01 (16-05-1837-5)						
1,1-Dichloroethene	4.7		1.0	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	21		1.0	ug/L	EPA 8260B	EPA 5030C
UAX-02 (16-05-1837-6)						
1,1-Dichloroethane	0.51	J	0.28*	ug/L	EPA 8260B	EPA 5030C
1,1-Dichloroethene	17		1.0	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	8.0		1.0	ug/L	EPA 8260B	EPA 5030C
UAX-03 (16-05-1837-7)						
1,1-Dichloroethene	0.84	J	0.43*	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	12		1.0	ug/L	EPA 8260B	EPA 5030C
HEW-01 (16-05-1837-8)						
Tetrachloroethene	25		20	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	2300		20	ug/L	EPA 8260B	EPA 5030C
HEW-0100 (16-05-1837-9)						
Tetrachloroethene	24		20	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	2100		20	ug/L	EPA 8260B	EPA 5030C
HEW-03 (16-05-1837-10)						
1,1-Dichloroethene	2.8		1.0	ug/L	EPA 8260B	EPA 5030C
Tetrachloroethene	2.0		1.0	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	180		1.0	ug/L	EPA 8260B	EPA 5030C
HEW-04 (16-05-1837-11)						
1,1-Dichloroethene	1.3	J	0.86*	ug/L	EPA 8260B	EPA 5030C
Tetrachloroethene	2.6		2.0	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	240		2.0	ug/L	EPA 8260B	EPA 5030C
HEW-05 (16-05-1837-12)						
Trichloroethene	200		1.0	ug/L	EPA 8260B	EPA 5030C

Subcontracted analyses, if any, are not included in this summary.

* MDL is shown

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 05/25/16
 Work Order: 16-05-1837
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 1 of 30

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
TB-052416	16-05-1837-1-A	05/24/16 08:00	Aqueous	GC/MS WW	05/25/16	05/26/16 01:40	160525L043

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 05/25/16
 Work Order: 16-05-1837
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 2 of 30

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	ND	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	91	80-120			
Dibromofluoromethane	116	78-126			
1,2-Dichloroethane-d4	123	75-135			
Toluene-d8	103	80-120			



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 05/25/16
 Work Order: 16-05-1837
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 3 of 30

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LAX-01	16-05-1837-2-A	05/24/16 09:50	Aqueous	GC/MS WW	05/25/16	05/26/16 02:40	160525L043

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 05/25/16
 Work Order: 16-05-1837
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 4 of 30

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	ND	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	93	80-120			
Dibromofluoromethane	119	78-126			
1,2-Dichloroethane-d4	126	75-135			
Toluene-d8	103	80-120			



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 05/25/16
 Work Order: 16-05-1837
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 5 of 30

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LAX-02	16-05-1837-3-A	05/25/16 09:20	Aqueous	GC/MS WW	05/25/16	05/26/16 03:10	160525L043

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 05/25/16
 Work Order: 16-05-1837
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 6 of 30

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	0.44	1.0	0.37	1.00	J
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	91	80-120	
Dibromofluoromethane	118	78-126	
1,2-Dichloroethane-d4	125	75-135	
Toluene-d8	102	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 05/25/16
 Work Order: 16-05-1837
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 7 of 30

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LAX-03	16-05-1837-4-A	05/24/16 09:45	Aqueous	GC/MS WW	05/25/16	05/26/16 03:40	160525L043

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	1.6	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 05/25/16
 Work Order: 16-05-1837
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 8 of 30

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	0.95	1.0	0.37	1.00	J
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	93	80-120	
Dibromofluoromethane	117	78-126	
1,2-Dichloroethane-d4	125	75-135	
Toluene-d8	104	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 05/25/16
 Work Order: 16-05-1837
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 9 of 30

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UAX-01	16-05-1837-5-A	05/24/16 14:30	Aqueous	GC/MS WW	05/25/16	05/26/16 04:10	160525L043

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	4.7	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 05/25/16
 Work Order: 16-05-1837
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 10 of 30

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	21	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	91	80-120			
Dibromofluoromethane	119	78-126			
1,2-Dichloroethane-d4	127	75-135			
Toluene-d8	103	80-120			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 05/25/16
 Work Order: 16-05-1837
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 11 of 30

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UAX-02	16-05-1837-6-A	05/24/16 13:30	Aqueous	GC/MS WW	05/25/16	05/26/16 02:10	160525L043

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	0.51	1.0	0.28	1.00	J
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	17	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 05/25/16
 Work Order: 16-05-1837
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 12 of 30

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	8.0	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	90	80-120	
Dibromofluoromethane	115	78-126	
1,2-Dichloroethane-d4	122	75-135	
Toluene-d8	103	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 05/25/16
 Work Order: 16-05-1837
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 13 of 30

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UAX-03	16-05-1837-7-A	05/24/16 12:35	Aqueous	GC/MS WW	05/25/16	05/26/16 04:39	160525L043

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	0.84	1.0	0.43	1.00	J
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 05/25/16
 Work Order: 16-05-1837
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 14 of 30

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	12	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	92	80-120			
Dibromofluoromethane	118	78-126			
1,2-Dichloroethane-d4	127	75-135			
Toluene-d8	103	80-120			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 05/25/16
 Work Order: 16-05-1837
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 15 of 30

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
HEW-01	16-05-1837-8-A	05/24/16 13:50	Aqueous	GC/MS WW	05/25/16	05/26/16 06:39	160525L043

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	400	200	20.0	
Benzene	ND	10	2.8	20.0	
Bromobenzene	ND	20	6.1	20.0	
Bromochloromethane	ND	20	9.5	20.0	
Bromodichloromethane	ND	20	4.1	20.0	
Bromoform	ND	20	10	20.0	
Bromomethane	ND	200	78	20.0	
2-Butanone	ND	200	88	20.0	
n-Butylbenzene	ND	20	4.6	20.0	
sec-Butylbenzene	ND	20	4.9	20.0	
tert-Butylbenzene	ND	20	5.5	20.0	
Carbon Disulfide	ND	200	82	20.0	
Carbon Tetrachloride	ND	10	4.5	20.0	
Chlorobenzene	ND	20	3.4	20.0	
Chloroethane	ND	100	46	20.0	
Chloroform	ND	20	9.2	20.0	
Chloromethane	ND	200	71	20.0	
2-Chlorotoluene	ND	20	4.8	20.0	
4-Chlorotoluene	ND	20	2.7	20.0	
Dibromochloromethane	ND	20	5.0	20.0	
1,2-Dibromo-3-Chloropropane	ND	100	25	20.0	
1,2-Dibromoethane	ND	20	7.2	20.0	
Dibromomethane	ND	20	9.2	20.0	
1,2-Dichlorobenzene	ND	20	9.1	20.0	
1,3-Dichlorobenzene	ND	20	8.0	20.0	
1,4-Dichlorobenzene	ND	20	8.6	20.0	
Dichlorodifluoromethane	ND	20	9.1	20.0	
1,1-Dichloroethane	ND	20	5.6	20.0	
1,2-Dichloroethane	ND	10	4.8	20.0	
1,1-Dichloroethene	ND	20	8.6	20.0	
c-1,2-Dichloroethene	ND	20	9.5	20.0	
t-1,2-Dichloroethene	ND	20	7.4	20.0	
1,2-Dichloropropane	ND	20	8.5	20.0	
1,3-Dichloropropane	ND	20	6.1	20.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 05/25/16
 Work Order: 16-05-1837
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 16 of 30

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	20	7.3	20.0	
1,1-Dichloropropene	ND	20	9.3	20.0	
c-1,3-Dichloropropene	ND	10	4.9	20.0	
t-1,3-Dichloropropene	ND	10	5.1	20.0	
Ethylbenzene	ND	20	2.8	20.0	
2-Hexanone	ND	200	83	20.0	
Isopropylbenzene	ND	20	12	20.0	
p-Isopropyltoluene	ND	20	3.2	20.0	
Methylene Chloride	ND	200	77	20.0	
4-Methyl-2-Pentanone	ND	200	88	20.0	
Naphthalene	ND	200	100	20.0	
n-Propylbenzene	ND	20	3.5	20.0	
Styrene	ND	20	3.4	20.0	
1,1,1,2-Tetrachloroethane	ND	20	8.1	20.0	
1,1,2,2-Tetrachloroethane	ND	20	8.2	20.0	
Tetrachloroethene	25	20	7.7	20.0	
Toluene	ND	20	4.7	20.0	
1,2,3-Trichlorobenzene	ND	20	10	20.0	
1,2,4-Trichlorobenzene	ND	20	10	20.0	
1,1,1-Trichloroethane	ND	20	6.1	20.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	200	78	20.0	
1,1,2-Trichloroethane	ND	20	7.7	20.0	
Trichloroethene	2300	20	7.4	20.0	
Trichlorofluoromethane	ND	200	66	20.0	
1,2,3-Trichloropropane	ND	100	13	20.0	
1,2,4-Trimethylbenzene	ND	20	7.2	20.0	
1,3,5-Trimethylbenzene	ND	20	5.7	20.0	
Vinyl Acetate	ND	200	110	20.0	
Vinyl Chloride	ND	10	6.0	20.0	
p/m-Xylene	ND	20	6.0	20.0	
o-Xylene	ND	20	4.6	20.0	
Methyl-t-Butyl Ether (MTBE)	ND	20	6.2	20.0	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	93	80-120	
Dibromofluoromethane	117	78-126	
1,2-Dichloroethane-d4	126	75-135	
Toluene-d8	103	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 05/25/16
 Work Order: 16-05-1837
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 17 of 30

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
HEW-0100	16-05-1837-9-A	05/24/16 14:00	Aqueous	GC/MS WW	05/25/16	05/26/16 07:09	160525L043

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	400	200	20.0	
Benzene	ND	10	2.8	20.0	
Bromobenzene	ND	20	6.1	20.0	
Bromochloromethane	ND	20	9.5	20.0	
Bromodichloromethane	ND	20	4.1	20.0	
Bromoform	ND	20	10	20.0	
Bromomethane	ND	200	78	20.0	
2-Butanone	ND	200	88	20.0	
n-Butylbenzene	ND	20	4.6	20.0	
sec-Butylbenzene	ND	20	4.9	20.0	
tert-Butylbenzene	ND	20	5.5	20.0	
Carbon Disulfide	ND	200	82	20.0	
Carbon Tetrachloride	ND	10	4.5	20.0	
Chlorobenzene	ND	20	3.4	20.0	
Chloroethane	ND	100	46	20.0	
Chloroform	ND	20	9.2	20.0	
Chloromethane	ND	200	71	20.0	
2-Chlorotoluene	ND	20	4.8	20.0	
4-Chlorotoluene	ND	20	2.7	20.0	
Dibromochloromethane	ND	20	5.0	20.0	
1,2-Dibromo-3-Chloropropane	ND	100	25	20.0	
1,2-Dibromoethane	ND	20	7.2	20.0	
Dibromomethane	ND	20	9.2	20.0	
1,2-Dichlorobenzene	ND	20	9.1	20.0	
1,3-Dichlorobenzene	ND	20	8.0	20.0	
1,4-Dichlorobenzene	ND	20	8.6	20.0	
Dichlorodifluoromethane	ND	20	9.1	20.0	
1,1-Dichloroethane	ND	20	5.6	20.0	
1,2-Dichloroethane	ND	10	4.8	20.0	
1,1-Dichloroethene	ND	20	8.6	20.0	
c-1,2-Dichloroethene	ND	20	9.5	20.0	
t-1,2-Dichloroethene	ND	20	7.4	20.0	
1,2-Dichloropropane	ND	20	8.5	20.0	
1,3-Dichloropropane	ND	20	6.1	20.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 05/25/16
 Work Order: 16-05-1837
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 18 of 30

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	20	7.3	20.0	
1,1-Dichloropropene	ND	20	9.3	20.0	
c-1,3-Dichloropropene	ND	10	4.9	20.0	
t-1,3-Dichloropropene	ND	10	5.1	20.0	
Ethylbenzene	ND	20	2.8	20.0	
2-Hexanone	ND	200	83	20.0	
Isopropylbenzene	ND	20	12	20.0	
p-Isopropyltoluene	ND	20	3.2	20.0	
Methylene Chloride	ND	200	77	20.0	
4-Methyl-2-Pentanone	ND	200	88	20.0	
Naphthalene	ND	200	100	20.0	
n-Propylbenzene	ND	20	3.5	20.0	
Styrene	ND	20	3.4	20.0	
1,1,1,2-Tetrachloroethane	ND	20	8.1	20.0	
1,1,2,2-Tetrachloroethane	ND	20	8.2	20.0	
Tetrachloroethene	24	20	7.7	20.0	
Toluene	ND	20	4.7	20.0	
1,2,3-Trichlorobenzene	ND	20	10	20.0	
1,2,4-Trichlorobenzene	ND	20	10	20.0	
1,1,1-Trichloroethane	ND	20	6.1	20.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	200	78	20.0	
1,1,2-Trichloroethane	ND	20	7.7	20.0	
Trichloroethene	2100	20	7.4	20.0	
Trichlorofluoromethane	ND	200	66	20.0	
1,2,3-Trichloropropane	ND	100	13	20.0	
1,2,4-Trimethylbenzene	ND	20	7.2	20.0	
1,3,5-Trimethylbenzene	ND	20	5.7	20.0	
Vinyl Acetate	ND	200	110	20.0	
Vinyl Chloride	ND	10	6.0	20.0	
p/m-Xylene	ND	20	6.0	20.0	
o-Xylene	ND	20	4.6	20.0	
Methyl-t-Butyl Ether (MTBE)	ND	20	6.2	20.0	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	91	80-120			
Dibromofluoromethane	118	78-126			
1,2-Dichloroethane-d4	127	75-135			
Toluene-d8	103	80-120			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 05/25/16
 Work Order: 16-05-1837
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 19 of 30

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
HEW-03	16-05-1837-10-A	05/24/16 14:20	Aqueous	GC/MS WW	05/25/16	05/26/16 05:09	160525L043

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	2.8	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 05/25/16
 Work Order: 16-05-1837
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 20 of 30

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	2.0	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	180	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	90	80-120			
Dibromofluoromethane	120	78-126			
1,2-Dichloroethane-d4	127	75-135			
Toluene-d8	104	80-120			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 05/25/16
 Work Order: 16-05-1837
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 21 of 30

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
HEW-04	16-05-1837-11-A	05/24/16 12:45	Aqueous	GC/MS WW	05/25/16	05/26/16 07:39	160525L043

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	40	20	2.00	
Benzene	ND	1.0	0.28	2.00	
Bromobenzene	ND	2.0	0.61	2.00	
Bromochloromethane	ND	2.0	0.95	2.00	
Bromodichloromethane	ND	2.0	0.41	2.00	
Bromoform	ND	2.0	1.0	2.00	
Bromomethane	ND	20	7.8	2.00	
2-Butanone	ND	20	8.8	2.00	
n-Butylbenzene	ND	2.0	0.46	2.00	
sec-Butylbenzene	ND	2.0	0.49	2.00	
tert-Butylbenzene	ND	2.0	0.55	2.00	
Carbon Disulfide	ND	20	8.2	2.00	
Carbon Tetrachloride	ND	1.0	0.45	2.00	
Chlorobenzene	ND	2.0	0.34	2.00	
Chloroethane	ND	10	4.6	2.00	
Chloroform	ND	2.0	0.92	2.00	
Chloromethane	ND	20	7.1	2.00	
2-Chlorotoluene	ND	2.0	0.48	2.00	
4-Chlorotoluene	ND	2.0	0.27	2.00	
Dibromochloromethane	ND	2.0	0.50	2.00	
1,2-Dibromo-3-Chloropropane	ND	10	2.5	2.00	
1,2-Dibromoethane	ND	2.0	0.72	2.00	
Dibromomethane	ND	2.0	0.92	2.00	
1,2-Dichlorobenzene	ND	2.0	0.91	2.00	
1,3-Dichlorobenzene	ND	2.0	0.80	2.00	
1,4-Dichlorobenzene	ND	2.0	0.86	2.00	
Dichlorodifluoromethane	ND	2.0	0.91	2.00	
1,1-Dichloroethane	ND	2.0	0.56	2.00	
1,2-Dichloroethane	ND	1.0	0.48	2.00	
1,1-Dichloroethene	1.3	2.0	0.86	2.00	J
c-1,2-Dichloroethene	ND	2.0	0.95	2.00	
t-1,2-Dichloroethene	ND	2.0	0.74	2.00	
1,2-Dichloropropane	ND	2.0	0.85	2.00	
1,3-Dichloropropane	ND	2.0	0.61	2.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 05/25/16
 Work Order: 16-05-1837
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 22 of 30

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	2.0	0.73	2.00	
1,1-Dichloropropene	ND	2.0	0.93	2.00	
c-1,3-Dichloropropene	ND	1.0	0.49	2.00	
t-1,3-Dichloropropene	ND	1.0	0.51	2.00	
Ethylbenzene	ND	2.0	0.28	2.00	
2-Hexanone	ND	20	8.3	2.00	
Isopropylbenzene	ND	2.0	1.2	2.00	
p-Isopropyltoluene	ND	2.0	0.32	2.00	
Methylene Chloride	ND	20	7.7	2.00	
4-Methyl-2-Pentanone	ND	20	8.8	2.00	
Naphthalene	ND	20	10	2.00	
n-Propylbenzene	ND	2.0	0.35	2.00	
Styrene	ND	2.0	0.34	2.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.81	2.00	
1,1,2,2-Tetrachloroethane	ND	2.0	0.82	2.00	
Tetrachloroethene	2.6	2.0	0.77	2.00	
Toluene	ND	2.0	0.47	2.00	
1,2,3-Trichlorobenzene	ND	2.0	1.0	2.00	
1,2,4-Trichlorobenzene	ND	2.0	1.0	2.00	
1,1,1-Trichloroethane	ND	2.0	0.61	2.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	20	7.8	2.00	
1,1,2-Trichloroethane	ND	2.0	0.77	2.00	
Trichloroethene	240	2.0	0.74	2.00	
Trichlorofluoromethane	ND	20	6.6	2.00	
1,2,3-Trichloropropane	ND	10	1.3	2.00	
1,2,4-Trimethylbenzene	ND	2.0	0.72	2.00	
1,3,5-Trimethylbenzene	ND	2.0	0.57	2.00	
Vinyl Acetate	ND	20	11	2.00	
Vinyl Chloride	ND	1.0	0.60	2.00	
p/m-Xylene	ND	2.0	0.60	2.00	
o-Xylene	ND	2.0	0.46	2.00	
Methyl-t-Butyl Ether (MTBE)	ND	2.0	0.62	2.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	90	80-120			
Dibromofluoromethane	118	78-126			
1,2-Dichloroethane-d4	126	75-135			
Toluene-d8	104	80-120			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 05/25/16
 Work Order: 16-05-1837
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 23 of 30

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
HEW-05	16-05-1837-12-A	05/24/16 12:15	Aqueous	GC/MS WW	05/25/16	05/26/16 05:39	160525L043

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 05/25/16
 Work Order: 16-05-1837
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 24 of 30

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	200	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	89	80-120			
Dibromofluoromethane	120	78-126			
1,2-Dichloroethane-d4	129	75-135			
Toluene-d8	103	80-120			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 05/25/16
 Work Order: 16-05-1837
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 25 of 30

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
RB-052516	16-05-1837-13-B	05/25/16 10:00	Aqueous	GC/MS WW	05/26/16	05/26/16 14:14	160526L018

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 05/25/16
Work Order: 16-05-1837
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 26 of 30

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	ND	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	92	80-120			
Dibromofluoromethane	119	78-126			
1,2-Dichloroethane-d4	125	75-135			
Toluene-d8	102	80-120			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 05/25/16
 Work Order: 16-05-1837
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 27 of 30

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-001-20458	N/A	Aqueous	GC/MS WW	05/25/16	05/26/16 01:10	160525L043

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 05/25/16
 Work Order: 16-05-1837
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 28 of 30

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	ND	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	92	80-120			
Dibromofluoromethane	113	78-126			
1,2-Dichloroethane-d4	120	75-135			
Toluene-d8	103	80-120			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 05/25/16
 Work Order: 16-05-1837
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 29 of 30

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-001-20461	N/A	Aqueous	GC/MS WW	05/26/16	05/26/16 13:34	160526L018

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 05/25/16
 Work Order: 16-05-1837
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon / 764.10

Page 30 of 30

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	ND	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	93	80-120			
Dibromofluoromethane	115	78-126			
1,2-Dichloroethane-d4	124	75-135			
Toluene-d8	102	80-120			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Quality Control - Spike/Spike Duplicate

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 05/25/16
Work Order: 16-05-1837
Preparation: EPA 5030C
Method: EPA 8260B

Project: Building 684 - Raytheon / 764.10

Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number				
UAX-02	Sample	Aqueous	GC/MS WW	05/25/16	05/26/16 02:10	160525S026				
UAX-02	Matrix Spike	Aqueous	GC/MS WW	05/25/16	05/26/16 08:09	160525S026				
UAX-02	Matrix Spike Duplicate	Aqueous	GC/MS WW	05/25/16	05/26/16 08:39	160525S026				
Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Benzene	ND	50.00	52.27	105	53.14	106	74-122	2	0-21	
Carbon Tetrachloride	ND	50.00	60.26	121	60.03	120	60-144	0	0-21	
Chlorobenzene	ND	50.00	53.33	107	54.40	109	73-120	2	0-22	
1,2-Dibromoethane	ND	50.00	54.40	109	55.16	110	80-122	1	0-20	
1,2-Dichlorobenzene	ND	50.00	49.96	100	51.11	102	70-120	2	0-26	
1,2-Dichloroethane	ND	50.00	61.04	122	60.55	121	64-142	1	0-20	
1,1-Dichloroethene	16.96	50.00	69.23	105	71.72	110	52-136	4	0-21	
Ethylbenzene	ND	50.00	53.68	107	54.67	109	77-125	2	0-24	
Toluene	ND	50.00	54.10	108	54.21	108	72-126	0	0-23	
Trichloroethene	7.979	50.00	59.16	102	60.60	105	74-128	2	0-22	
Vinyl Chloride	ND	50.00	57.70	115	62.16	124	67-133	7	0-20	
p/m-Xylene	ND	100.0	109.3	109	111.1	111	63-129	2	0-25	
o-Xylene	ND	50.00	54.30	109	55.65	111	62-128	2	0-24	
Methyl-t-Butyl Ether (MTBE)	ND	50.00	51.67	103	51.99	104	68-134	1	0-21	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 05/25/16
 Work Order: 16-05-1837
 Preparation: EPA 5030C
 Method: EPA 8260B

Project: Building 684 - Raytheon / 764.10

Page 1 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number	
099-14-001-20458	LCS	Aqueous	GC/MS WW	05/25/16	05/25/16 23:11	160525L043	
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>ME CL</u>	<u>Qualifiers</u>
Benzene		50.00	49.98	100	80-120	73-127	
Carbon Tetrachloride		50.00	54.96	110	67-139	55-151	
Chlorobenzene		50.00	51.87	104	78-120	71-127	
1,2-Dibromoethane		50.00	54.07	108	80-120	73-127	
1,2-Dichlorobenzene		50.00	51.12	102	63-129	52-140	
1,2-Dichloroethane		50.00	59.10	118	70-130	60-140	
1,1-Dichloroethene		50.00	53.61	107	66-126	56-136	
Ethylbenzene		50.00	51.04	102	80-123	73-130	
Toluene		50.00	52.12	104	80-120	73-127	
Trichloroethene		50.00	50.93	102	80-122	73-129	
Vinyl Chloride		50.00	58.30	117	70-130	60-140	
p/m-Xylene		100.0	104.5	104	75-123	67-131	
o-Xylene		50.00	52.57	105	74-122	66-130	
Methyl-t-Butyl Ether (MTBE)		50.00	51.60	103	69-129	59-139	

Total number of LCS compounds: 14

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents



Calscience

Quality Control - LCS/LCSD

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 05/25/16
Work Order: 16-05-1837
Preparation: EPA 5030C
Method: EPA 8260B

Project: Building 684 - Raytheon / 764.10

Page 2 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number				
099-14-001-20461	LCS	Aqueous	GC/MS WW	05/26/16	05/26/16 10:39	160526L018				
099-14-001-20461	LCSD	Aqueous	GC/MS WW	05/26/16	05/26/16 11:09	160526L018				
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Benzene	50.00	48.93	98	47.98	96	80-120	73-127	2	0-20	
Carbon Tetrachloride	50.00	55.73	111	53.87	108	67-139	55-151	3	0-20	
Chlorobenzene	50.00	51.17	102	50.25	101	78-120	71-127	2	0-20	
1,2-Dibromoethane	50.00	51.26	103	50.88	102	80-120	73-127	1	0-20	
1,2-Dichlorobenzene	50.00	50.00	100	49.72	99	63-129	52-140	1	0-20	
1,2-Dichloroethane	50.00	56.91	114	56.18	112	70-130	60-140	1	0-20	
1,1-Dichloroethene	50.00	50.66	101	49.81	100	66-126	56-136	2	0-20	
Ethylbenzene	50.00	51.21	102	50.05	100	80-123	73-130	2	0-20	
Toluene	50.00	51.72	103	50.13	100	80-120	73-127	3	0-20	
Trichloroethene	50.00	49.00	98	48.14	96	80-122	73-129	2	0-20	
Vinyl Chloride	50.00	56.42	113	55.81	112	70-130	60-140	1	0-20	
p/m-Xylene	100.0	104.9	105	101.1	101	75-123	67-131	4	0-20	
o-Xylene	50.00	52.54	105	51.77	104	74-122	66-130	1	0-20	
Methyl-t-Butyl Ether (MTBE)	50.00	47.57	95	48.96	98	69-129	59-139	3	0-20	

Total number of LCS compounds: 14

Total number of ME compounds: 0

Total number of ME compounds allowed: 1

LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Sample Analysis Summary Report

Work Order: 16-05-1837

Page 1 of 1

<u>Method</u>	<u>Extraction</u>	<u>Chemist ID</u>	<u>Instrument</u>	<u>Analytical Location</u>
EPA 8260B	EPA 5030C	986	GC/MS WW	2
EPA 8260B	EPA 5030C	996	GC/MS WW	2

Glossary of Terms and Qualifiers

Work Order: 16-05-1837

Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

PROJECT: Building 684 - Raytheon

TASK NO.: 764.10

Project Manager Ken Puentes
QA Manager _____
Phone 858-455-6500

Project BCI Fullerton 764.10	Sampled By: T. Evans, K. Fong G. Peterson	SAMPLE COLLECTION		Groundwater	Lab prepared water	Hydrochloric Acid (HCl)	Ice	40-ml VOA	1 L Amber	VOCs by EPA 8260B	1,4-Dioxane by 8270 SIM	ESTIMATED CONCENTRATION					Standard TAT	MS/MSD Requested	REMARKS
		Date	Time									0-10	10-100	100-1,000	>1,000				
1	TB-052416	5/24/2016	0800	X	X		X	2		X						X			
2	LAX-01	5/24/2016	950	X	X		X	3		X	X					X			
3	LAX-02	5/25/16	920	X	X		X	3		X	X					X		REPORT "J" FLAGS	
4	LAX-03	5/25/16	945	X	X		X	3		X	X					X			
5	UAX-01	5/24/16	1430	X	X		X	3		X		X				X		LOG CODE: HARG	
6	UAX-02	5/24/16	1330	X	X		X	5		X		X				X	X	Geotracker ID: T0605900143	
7	UAX-03	5/24/16	1235	X	X		X	3		X		X				X			
8	HEW-01	5/24/16	1350	X	X		X	3		X			X			X			
9	HEW-0100	5/24/16	1400	X	X		X	3		X			X			X			
10	HEW-03	5/24/16	1420	X	X		X	3		X		X				X			
11	HEW-04	5/24/16	1245	X	X		X	3		X		X				X			
12	HEW-05	5/24/16	1215	X	X		X	3		X		X				X			
13	RB-052516	5/25/16	1000		X	X		X	3	X						X			

Laboratory
ECI
Attn: Virendra Patel

Total number of containers per analysis: 40 # 0 0 0

Total No. of Containers: 40

Relinquished By: / Company:	Date / Time	Received By: / Company	Date / Time
<u>[Signature]</u>	<u>5/25/16</u>		
Relinquished By: / Company:	Date / Time	Received By: / Company	Date / Time
<u>H+A Inc</u>	<u>14:00</u>	<u>[Signature]</u>	<u>5/25/16 1400</u>

- No. of containers correct
- Received in good condition
- Custody seals secure
- Conforms to COC document

_____ Temperature on receipt

Send Results to:
Ken Puentes
9171 Towne Centre Drive
Suite 375
San Diego, CA 92122
Ph: 858-455-6500
kpuentes@hargis.com

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: Hargis & Assoc., Inc.

DATE: 05/25/2016

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)
 Thermometer ID: SC2A (CF: 0.0°C); Temperature (w/o CF): 3-8 °C (w/ CF): 3-8 °C; Blank Sample
 Sample(s) outside temperature criteria (PM/APM contacted by: _____)
 Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling
 Sample(s) received at ambient temperature; placed on ice for transport by courier
 Ambient Temperature: Air Filter

Checked by: 836

CUSTODY SEAL:

Cooler Present and Intact Present but Not Intact Not Present N/A
 Sample(s) Present and Intact Present but Not Intact Not Present N/A

Checked by: 836

Checked by: 15

SAMPLE CONDITION:

	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Sampling date <input type="checkbox"/> Sampling time <input type="checkbox"/> Matrix <input type="checkbox"/> Number of containers			
<input type="checkbox"/> No analysis requested <input type="checkbox"/> Not relinquished <input type="checkbox"/> No relinquished date <input type="checkbox"/> No relinquished time			
Sampler's name indicated on COC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with COC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and in good condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers for analyses requested	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sufficient volume/mass for analyses requested	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples received within holding time	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aqueous samples for certain analyses received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfide <input type="checkbox"/> Dissolved Oxygen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation chemical(s) noted on COC and/or sample container	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unpreserved aqueous sample(s) received for certain analyses			
<input type="checkbox"/> Volatile Organics <input type="checkbox"/> Total Metals <input type="checkbox"/> Dissolved Metals			
Container(s) for certain analysis free of headspace	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Volatile Organics <input type="checkbox"/> Dissolved Gases (RSK-175) <input type="checkbox"/> Dissolved Oxygen (SM 4500)			
<input type="checkbox"/> Carbon Dioxide (SM 4500) <input type="checkbox"/> Ferrous Iron (SM 3500) <input type="checkbox"/> Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CONTAINER TYPE:

(Trip Blank Lot Number: _____)

Aqueous: VOA VOAh VOAna₂ 100PJ 100PJna₂ 125AGB 125AGBh 125AGBp 125PB
 125PBz_{anna} 250AGB 250CGB 250CGBs 250PB 250PBn 500AGB 500AGJ 500AGJs
 500PB 1AGB 1AGBna₂ 1AGBs 1PB 1PBna _____ _____ _____ _____
Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve (_____) EnCores® (_____) TerraCores® (_____) _____
Air: Tedlar™ Canister Sorbent Tube PUF _____ **Other Matrix** (____): _____ _____

Container: A = Amber, B = Bottle, C = Clear, E = Envelope, G = Glass, J = Jar, P = Plastic, and Z = Ziploc/Resealable Bag

Preservative: b = buffered, f = filtered, h = HCl, n = HNO₃, na = NaOH, na₂ = Na₂S₂O₃, p = H₃PO₄, Labeled/Checked by: 15

s = H₂SO₄, u = ultra-pure, z_{anna} = Zn(CH₃CO₂)₂ + NaOH Reviewed by: 681



June 02, 2016

Ken Puentes
Hargis & Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122
Tel: (858) 455-6500
Fax: (858) 455-6533

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003
TCEQ No. : T104704502

Re: ATL Work Order Number : 1601849
Client Reference : Building 684 - Raytheon, 764.10

Enclosed are the results for sample(s) received on May 25, 2016 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,



Eddie Rodriguez
Laboratory Director

The cover letter and the case narrative are an integral part of this analytical report and its absence renders the report invalid. Test results contained within this data package meet the requirements of applicable state-specific certification programs. The report cannot be reproduced without written permission from the client and Advanced Technology Laboratories.



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Building 684 - Raytheon, 764.10

Report To : Ken Puentes

Reported : 06/02/2016

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
LAX-01	1601849-01	Groundwater	5/24/16 9:50	5/25/16 11:35
LAX-02	1601849-02	Groundwater	5/25/16 9:20	5/25/16 11:35
LAX-03	1601849-03	Groundwater	5/25/16 9:45	5/25/16 11:35
UAX-01	1601849-04	Groundwater	5/24/16 14:30	5/25/16 11:35
UAX-02	1601849-05	Groundwater	5/24/16 13:30	5/25/16 11:35
UAX-03	1601849-06	Groundwater	5/24/16 12:35	5/25/16 11:35
HEW-01	1601849-07	Groundwater	5/24/16 13:50	5/25/16 11:35
HEW-0100	1601849-08	Groundwater	5/24/16 14:00	5/25/16 11:35
HEW-03	1601849-09	Groundwater	5/24/16 14:20	5/25/16 11:35
HEW-04	1601849-10	Groundwater	5/24/16 12:45	5/25/16 11:35
HEW-05	1601849-11	Groundwater	5/24/16 12:15	5/25/16 11:35
RB-052516	1601849-12	Lab prepared water	5/25/16 10:00	5/25/16 11:35

CASE NARRATIVE

Results were J-flagged. "J" is used to flag those results that are between the PQL (Practical Quantitation Limit) and the calculated MDL (Method Detection Limit). Results that are "J" flagged are estimated values since it becomes difficult to accurately quantitate the analyte near the MDL.



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9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Building 684 - Raytheon, 764.10

Report To : Ken Puentes

Reported : 06/02/2016

Client Sample ID LAX-01

Lab ID: 1601849-01

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: MFR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.11	1	B6E0598	05/26/2016	05/26/16 16:07	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	59.4 %		31 - 106		B6E0598	05/26/2016	05/26/16 16:07	
<i>Surrogate: 2-Fluorobiphenyl</i>	71.2 %		28 - 122		B6E0598	05/26/2016	05/26/16 16:07	
<i>Surrogate: 4-Terphenyl-d14</i>	74.3 %		43 - 131		B6E0598	05/26/2016	05/26/16 16:07	
<i>Surrogate: Nitrobenzene-d5</i>	56.8 %		20 - 119		B6E0598	05/26/2016	05/26/16 16:07	



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San Diego, CA 92122

Project Number : Building 684 - Raytheon, 764.10

Report To : Ken Puentes

Reported : 06/02/2016

Client Sample ID LAX-02

Lab ID: 1601849-02

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: MFR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.11	1	B6E0598	05/26/2016	05/26/16 16:36	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>60.4 %</i>		<i>31 - 106</i>		B6E0598	05/26/2016	<i>05/26/16 16:36</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>72.5 %</i>		<i>28 - 122</i>		B6E0598	05/26/2016	<i>05/26/16 16:36</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>69.5 %</i>		<i>43 - 131</i>		B6E0598	05/26/2016	<i>05/26/16 16:36</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>60.1 %</i>		<i>20 - 119</i>		B6E0598	05/26/2016	<i>05/26/16 16:36</i>	



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San Diego, CA 92122

Project Number : Building 684 - Raytheon, 764.10

Report To : Ken Puentes

Reported : 06/02/2016

Client Sample ID LAX-03

Lab ID: 1601849-03

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: MFR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	0.48	0.20	0.11	1	B6E0598	05/26/2016	05/26/16 17:03	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>58.0 %</i>		<i>31 - 106</i>		B6E0598	05/26/2016	<i>05/26/16 17:03</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>69.7 %</i>		<i>28 - 122</i>		B6E0598	05/26/2016	<i>05/26/16 17:03</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>71.3 %</i>		<i>43 - 131</i>		B6E0598	05/26/2016	<i>05/26/16 17:03</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>56.1 %</i>		<i>20 - 119</i>		B6E0598	05/26/2016	<i>05/26/16 17:03</i>	



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9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Building 684 - Raytheon, 764.10

Report To : Ken Puentes

Reported : 06/02/2016

Client Sample ID UAX-01

Lab ID: 1601849-04

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: MFR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	0.28	0.20	0.11	1	B6E0598	05/26/2016	05/26/16 17:31	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>60.1 %</i>		<i>31 - 106</i>		B6E0598	05/26/2016	<i>05/26/16 17:31</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>71.1 %</i>		<i>28 - 122</i>		B6E0598	05/26/2016	<i>05/26/16 17:31</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>67.8 %</i>		<i>43 - 131</i>		B6E0598	05/26/2016	<i>05/26/16 17:31</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>56.6 %</i>		<i>20 - 119</i>		B6E0598	05/26/2016	<i>05/26/16 17:31</i>	



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San Diego, CA 92122

Project Number : Building 684 - Raytheon, 764.10

Report To : Ken Puentes

Reported : 06/02/2016

Client Sample ID UAX-02

Lab ID: 1601849-05

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: MFR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	1.8	0.20	0.11	1	B6E0598	05/26/2016	05/26/16 17:59	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>63.5 %</i>		<i>31 - 106</i>		B6E0598	05/26/2016	<i>05/26/16 17:59</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>77.9 %</i>		<i>28 - 122</i>		B6E0598	05/26/2016	<i>05/26/16 17:59</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>75.6 %</i>		<i>43 - 131</i>		B6E0598	05/26/2016	<i>05/26/16 17:59</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>61.3 %</i>		<i>20 - 119</i>		B6E0598	05/26/2016	<i>05/26/16 17:59</i>	



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San Diego, CA 92122

Project Number : Building 684 - Raytheon, 764.10

Report To : Ken Puentes

Reported : 06/02/2016

Client Sample ID UAX-03

Lab ID: 1601849-06

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: MFR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	0.13	0.20	0.11	1	B6E0598	05/26/2016	05/26/16 18:27	J
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>55.3 %</i>		<i>31 - 106</i>		B6E0598	05/26/2016	<i>05/26/16 18:27</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>67.1 %</i>		<i>28 - 122</i>		B6E0598	05/26/2016	<i>05/26/16 18:27</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>73.7 %</i>		<i>43 - 131</i>		B6E0598	05/26/2016	<i>05/26/16 18:27</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>52.9 %</i>		<i>20 - 119</i>		B6E0598	05/26/2016	<i>05/26/16 18:27</i>	



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San Diego, CA 92122

Project Number : Building 684 - Raytheon, 764.10

Report To : Ken Puentes

Reported : 06/02/2016

Client Sample ID HEW-01

Lab ID: 1601849-07

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: MFR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	0.55	0.20	0.11	1	B6E0598	05/26/2016	05/26/16 18:54	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>67.0 %</i>		<i>31 - 106</i>		B6E0598	05/26/2016	<i>05/26/16 18:54</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>80.4 %</i>		<i>28 - 122</i>		B6E0598	05/26/2016	<i>05/26/16 18:54</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>81.6 %</i>		<i>43 - 131</i>		B6E0598	05/26/2016	<i>05/26/16 18:54</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>62.9 %</i>		<i>20 - 119</i>		B6E0598	05/26/2016	<i>05/26/16 18:54</i>	



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San Diego, CA 92122

Project Number : Building 684 - Raytheon, 764.10

Report To : Ken Puentes

Reported : 06/02/2016

Client Sample ID HEW-0100

Lab ID: 1601849-08

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: MFR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	2.1	0.20	0.11	1	B6E0598	05/26/2016	05/26/16 19:21	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>69.4 %</i>		<i>31 - 106</i>		B6E0598	05/26/2016	<i>05/26/16 19:21</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>84.2 %</i>		<i>28 - 122</i>		B6E0598	05/26/2016	<i>05/26/16 19:21</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>80.7 %</i>		<i>43 - 131</i>		B6E0598	05/26/2016	<i>05/26/16 19:21</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>63.2 %</i>		<i>20 - 119</i>		B6E0598	05/26/2016	<i>05/26/16 19:21</i>	



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Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Building 684 - Raytheon, 764.10

Report To : Ken Puentes

Reported : 06/02/2016

Client Sample ID HEW-03

Lab ID: 1601849-09

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: MFR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	0.60	0.20	0.11	1	B6E0598	05/26/2016	05/26/16 19:48	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>55.4 %</i>		<i>31 - 106</i>		B6E0598	05/26/2016	<i>05/26/16 19:48</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>76.2 %</i>		<i>28 - 122</i>		B6E0598	05/26/2016	<i>05/26/16 19:48</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>75.9 %</i>		<i>43 - 131</i>		B6E0598	05/26/2016	<i>05/26/16 19:48</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>59.1 %</i>		<i>20 - 119</i>		B6E0598	05/26/2016	<i>05/26/16 19:48</i>	



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Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Building 684 - Raytheon, 764.10

Report To : Ken Puentes

Reported : 06/02/2016

Client Sample ID HEW-04

Lab ID: 1601849-10

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: MFR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	4.2	0.20	0.11	1	B6E0598	05/26/2016	05/26/16 20:16	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>57.7 %</i>		<i>31 - 106</i>		B6E0598	05/26/2016	<i>05/26/16 20:16</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>77.0 %</i>		<i>28 - 122</i>		B6E0598	05/26/2016	<i>05/26/16 20:16</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>78.8 %</i>		<i>43 - 131</i>		B6E0598	05/26/2016	<i>05/26/16 20:16</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>60.9 %</i>		<i>20 - 119</i>		B6E0598	05/26/2016	<i>05/26/16 20:16</i>	



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego, CA 92122

Project Number : Building 684 - Raytheon, 764.10

Report To : Ken Puentes

Reported : 06/02/2016

Client Sample ID HEW-05

Lab ID: 1601849-11

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: MFR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	0.49	0.20	0.11	1	B6E0598	05/26/2016	05/26/16 20:43	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	<i>48.8 %</i>		<i>31 - 106</i>		B6E0598	05/26/2016	<i>05/26/16 20:43</i>	
<i>Surrogate: 2-Fluorobiphenyl</i>	<i>65.1 %</i>		<i>28 - 122</i>		B6E0598	05/26/2016	<i>05/26/16 20:43</i>	
<i>Surrogate: 4-Terphenyl-d14</i>	<i>70.7 %</i>		<i>43 - 131</i>		B6E0598	05/26/2016	<i>05/26/16 20:43</i>	
<i>Surrogate: Nitrobenzene-d5</i>	<i>51.2 %</i>		<i>20 - 119</i>		B6E0598	05/26/2016	<i>05/26/16 20:43</i>	



Certificate of Analysis

Hargis & Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122

Project Number : Building 684 - Raytheon, 764.10
 Report To : Ken Puentes
 Reported : 06/02/2016

Client Sample ID RB-052516

Lab ID: 1601849-12

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique

Analyst: MFR

Analyte	Result (ug/L)	PQL (ug/L)	MDL (ug/L)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
1,4-Dioxane	ND	0.20	0.11	1	B6E0598	05/26/2016	05/26/16 21:11	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	47.3 %		31 - 106		B6E0598	05/26/2016	05/26/16 21:11	
<i>Surrogate: 2-Fluorobiphenyl</i>	64.4 %		28 - 122		B6E0598	05/26/2016	05/26/16 21:11	
<i>Surrogate: 4-Terphenyl-d14</i>	70.2 %		43 - 131		B6E0598	05/26/2016	05/26/16 21:11	
<i>Surrogate: Nitrobenzene-d5</i>	50.7 %		20 - 119		B6E0598	05/26/2016	05/26/16 21:11	

QUALITY CONTROL SECTION

1,4-Dioxane by EPA 8270/SIM: Isotope Dilution Technique - Quality Control

Analyte	Result (ug/L)	PQL (ug/L)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
---------	------------------	---------------	----------------	------------------	-------	-----------------	-----	--------------	-------

Batch B6E0598 - MSSEMI_W

Blank (B6E0598-BLK1)

Prepared: 5/26/2016 Analyzed: 5/26/2016

1,4-Dioxane	ND	0.20					NR		
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	0.5524		1.00000		55.2	31 - 106			
<i>Surrogate: 2-Fluorobiphenyl</i>	0.7123		1.00000		71.2	28 - 122			
<i>Surrogate: 4-Terphenyl-d14</i>	0.7883		1.00000		78.8	43 - 131			
<i>Surrogate: Nitrobenzene-d5</i>	0.6113		1.00000		61.1	20 - 119			

LCS (B6E0598-BS1)

Prepared: 5/26/2016 Analyzed: 5/26/2016

1,4-Dioxane	1.19831	0.20	1.00000		120	49 - 169			
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	0.5728		1.00000		57.3	31 - 106			
<i>Surrogate: 2-Fluorobiphenyl</i>	0.7458		1.00000		74.6	28 - 122			
<i>Surrogate: 4-Terphenyl-d14</i>	0.7597		1.00000		76.0	43 - 131			
<i>Surrogate: Nitrobenzene-d5</i>	0.6745		1.00000		67.5	20 - 119			

LCS Dup (B6E0598-BSD1)

Prepared: 5/26/2016 Analyzed: 5/26/2016

1,4-Dioxane	1.19336	0.20	1.00000		119	49 - 169	0.414	20	
<i>Surrogate: 1,2-Dichlorobenzene-d4</i>	0.4835		1.00000		48.3	31 - 106			
<i>Surrogate: 2-Fluorobiphenyl</i>	0.6325		1.00000		63.2	28 - 122			
<i>Surrogate: 4-Terphenyl-d14</i>	0.8265		1.00000		82.7	43 - 131			
<i>Surrogate: Nitrobenzene-d5</i>	0.5594		1.00000		55.9	20 - 119			



Certificate of Analysis

Hargis & Associates, Inc.

9171 Towne Centre Drive, Suite 375

San Diego , CA 92122

Project Number : Building 684 - Raytheon, 764.10

Report To : Ken Puentes

Reported : 06/02/2016

Notes and Definitions

J	Analyte detected below the Practical Quantitation Limit but above or equal to the Method Detection Limit. Result is an estimated concentration.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Notes:

- (1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
- (2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
- (3) Results are wet unless otherwise specified.

PROJECT: Building 684 - Raytheon

TASK NO.: 764.10

Project Manager Ken Puentes
QA Manager _____
Phone 858-455-6500

Project BCI Fullerton 764.10	Sampled By: T. Evans, K. Fong G. Peterson	SAMPLE COLLECTION		Groundwater	Lab prepared water	Hydrochloric Acid (HCl)	Ice	40-ml VOA	1 L Amber	VOCs by EPA 8260B	1,4- Dioxane by 8270 SIM	ESTIMATED CONCENTRATION				Standard TAT	MS/MSD Requested	REMARKS
		Date	Time									0-10	10-100	100-1,000	>1,000			
1601849 -1	LAX-01	5/24/16	950	X			X		1		X					X		
-2	LAX-02	5/25/16	920	X			X		1		X					X		REPORT "J" FLAGS
-3	LAX-03	5/25/16	945	X			X		1		X					X		
-4	UAX-01	5/24/16	1430	X			X		1		X					X		LOG CODE: HARG
-5	UAX-02	5/24/16	1330	X			X		1		X					X		Geotracker ID:
-6	UAX-03	5/24/16	1235	X			X		1		X					X		T0605900143
-7	HEW-01	5/24/16	1350	X			X		1		X					X		
-8	HEW-0100	5/24/16	1400	X			X		1		X					X		
-9	HEW-03	5/24/16	1420	X			X		1		X					X		
-10	HEW-04	5/24/16	1245	X			X		1		X					X		
-11	HEW-05	5/24/16	1215	X			X		1		X					X		
-12	RB-052516	5/25/16	1000		X		X		1		X					X		

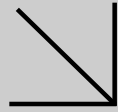
Total number of containers per analysis: 0 0 12 0 Total No. of Containers: 12

Relinquished By: / Company:	Date / Time	Received By: / Company	Date / Time
<i>[Signature]</i> / H+A	5/25/16 1135	<i>[Signature]</i> / ATL	5-25-16 1135
Relinquished By: / Company:	Date / Time	Received By: / Company	Date / Time
<i>[Signature]</i> / ATL	5-25-16 12:05	<i>[Signature]</i> / ATL	5/25/16 12:05

- No. of containers correct
- Received in good condition
- Custody seals secure
- Conforms to COC document

1.4 Temperature on receipt

Send Results to:
Ken Puentes
9171 Towne Centre Drive
Suite 375
San Diego, CA 92122
Ph: 858-455-6500
kpuentes@hargis.com

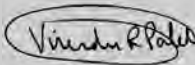

WORK ORDER NUMBER: 16-12-1873
The difference is service


AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For
Client: Hargis + Associates, Inc.

Client Project Name: Building 684 - Raytheon Task No. 764.10

Attention: Ken Puentes
 9171 Towne Centre Drive
 Suite 375
 San Diego, CA 92122-6215



 Approved for release on 01/03/2017 by:
 Virendra Patel
 Project Manager

ResultLink ▶

Email your PM ▶

Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

Contents

Client Project Name: Building 684 - Raytheon Task No. 764.10
Work Order Number: 16-12-1873

1	Work Order Narrative.	3
2	Sample Summary.	4
3	Detections Summary.	5
4	Client Sample Data.	8
	4.1 1,4-Dioxane by EPA 8270C (M) Isotope Dilution (Aqueous).	8
	4.2 EPA 8260B Volatile Organics (Aqueous).	11
5	Quality Control Sample Data.	93
	5.1 MS/MSD.	93
	5.2 LCS/LCSD.	102
6	Sample Analysis Summary.	111
7	Glossary of Terms and Qualifiers.	112
8	Chain-of-Custody/Sample Receipt Form.	113

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 12/19/16. They were assigned to Work Order 16-12-1873.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

Sample Summary

Client: Hargis + Associates, Inc. 9171 Towne Centre Drive, Suite 375 San Diego, CA 92122-6215	Work Order: 16-12-1873 Project Name: Building 684 - Raytheon Task No. 764.10 PO Number: Date/Time Received: 12/19/16 17:10 Number of Containers: 126
--	---

Attn: Ken Puentes

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
TB-121916	16-12-1873-1	12/19/16 07:00	2	Aqueous
LAX-01	16-12-1873-2	12/19/16 10:00	4	Aqueous
UA-08D	16-12-1873-3	12/19/16 11:00	5	Aqueous
UA-08	16-12-1873-4	12/19/16 11:15	3	Aqueous
UAX-03	16-12-1873-5	12/19/16 12:30	6	Aqueous
S-24	16-12-1873-6	12/19/16 12:40	3	Aqueous
UA-15D	16-12-1873-7	12/19/16 13:00	3	Aqueous
RB-121916C	16-12-1873-8	12/19/16 13:05	3	Aqueous
AB-02	16-12-1873-9	12/19/16 13:15	3	Aqueous
AB-0200	16-12-1873-10	12/19/16 13:25	3	Aqueous
LAX-02	16-12-1873-11	12/19/16 14:00	4	Aqueous
AB-01	16-12-1873-12	12/19/16 14:20	3	Aqueous
S-26	16-12-1873-13	12/19/16 14:30	5	Aqueous
UA-06D	16-12-1873-14	12/19/16 14:45	3	Aqueous
UA-06	16-12-1873-15	12/19/16 14:55	3	Aqueous
UA-0600	16-12-1873-16	12/19/16 15:00	3	Aqueous
RB-121916D	16-12-1873-17	12/19/16 15:15	4	Aqueous
UA-07D	16-12-1873-18	12/19/16 15:30	3	Aqueous
UA-07	16-12-1873-19	12/19/16 15:40	5	Aqueous
S-27	16-12-1873-20	12/19/16 08:40	3	Aqueous
S-15	16-12-1873-21	12/19/16 09:15	3	Aqueous
S-14	16-12-1873-22	12/19/16 09:40	3	Aqueous
LAX-03	16-12-1873-23	12/19/16 10:30	4	Aqueous
AB-03	16-12-1873-24	12/19/16 10:40	3	Aqueous
UAX-02	16-12-1873-25	12/19/16 11:00	4	Aqueous
UA-02	16-12-1873-26	12/19/16 12:30	3	Aqueous
RB-121916A	16-12-1873-27	12/19/16 12:40	3	Aqueous
UA-0200	16-12-1873-28	12/19/16 12:45	3	Aqueous
S-07	16-12-1873-29	12/19/16 12:50	3	Aqueous
HEW-03	16-12-1873-30	12/19/16 13:20	4	Aqueous
S-02	16-12-1873-31	12/19/16 13:45	3	Aqueous
S-03	16-12-1873-32	12/19/16 14:00	3	Aqueous
S-32	16-12-1873-33	12/19/16 14:20	3	Aqueous
UA-04D	16-12-1873-34	12/19/16 14:45	3	Aqueous
UAX-01	16-12-1873-35	12/19/16 15:00	4	Aqueous
S-04	16-12-1873-36	12/19/16 15:25	3	Aqueous
S-0400	16-12-1873-37	12/19/16 15:40	3	Aqueous

Detections Summary

Client: Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Work Order: 16-12-1873
 Project Name: Building 684 - Raytheon Task No. 764.10
 Received: 12/19/16

Attn: Ken Puentes

Page 1 of 3

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
UA-08D (16-12-1873-3)						
Trichloroethene	2.0		1.0	ug/L	EPA 8260B	EPA 5030C
UA-08 (16-12-1873-4)						
1,1-Dichloroethene	0.60	J	0.43*	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	12		1.0	ug/L	EPA 8260B	EPA 5030C
UAX-03 (16-12-1873-5)						
1,1-Dichloroethene	0.55	J	0.43*	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	10		1.0	ug/L	EPA 8260B	EPA 5030C
S-24 (16-12-1873-6)						
Trichloroethene	3.2		1.0	ug/L	EPA 8260B	EPA 5030C
AB-02 (16-12-1873-9)						
c-1,2-Dichloroethene	6.3		1.0	ug/L	EPA 8260B	EPA 5030C
t-1,2-Dichloroethene	17		1.0	ug/L	EPA 8260B	EPA 5030C
Tetrachloroethene	1.3		1.0	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	15		1.0	ug/L	EPA 8260B	EPA 5030C
AB-0200 (16-12-1873-10)						
c-1,2-Dichloroethene	6.1		1.0	ug/L	EPA 8260B	EPA 5030C
t-1,2-Dichloroethene	17		1.0	ug/L	EPA 8260B	EPA 5030C
Tetrachloroethene	1.1		1.0	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	14		1.0	ug/L	EPA 8260B	EPA 5030C
UA-06D (16-12-1873-14)						
Tetrachloroethene	2.5		1.0	ug/L	EPA 8260B	EPA 5030C
UA-06 (16-12-1873-15)						
Tetrachloroethene	2.5		1.0	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	0.79	J	0.37*	ug/L	EPA 8260B	EPA 5030C
UA-0600 (16-12-1873-16)						
Tetrachloroethene	2.8		1.0	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	1.5		1.0	ug/L	EPA 8260B	EPA 5030C
UA-07D (16-12-1873-18)						
1,1-Dichloroethane	1.0	J	0.28*	ug/L	EPA 8260B	EPA 5030C
Tetrachloroethene	0.84	J	0.39*	ug/L	EPA 8260B	EPA 5030C
UA-07 (16-12-1873-19)						
1,1-Dichloroethane	3.5		1.0	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	2.2		1.0	ug/L	EPA 8260B	EPA 5030C
S-15 (16-12-1873-21)						
Trichloroethene	2.1		1.0	ug/L	EPA 8260B	EPA 5030C
S-14 (16-12-1873-22)						
Trichloroethene	0.52	J	0.37*	ug/L	EPA 8260B	EPA 5030C

* MDL is shown

Detections Summary

Client: Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Work Order: 16-12-1873
 Project Name: Building 684 - Raytheon Task No. 764.10
 Received: 12/19/16

Attn: Ken Puentes

Page 2 of 3

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
LAX-03 (16-12-1873-23)						
1,1-Dichloroethene	0.49	J	0.43*	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	0.73	J	0.37*	ug/L	EPA 8260B	EPA 5030C
UAX-02 (16-12-1873-25)						
1,1-Dichloroethene	0.39	J	0.28*	ug/L	EPA 8260B	EPA 5030C
1,1-Dichloroethene	16		1.0	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	5.2		1.0	ug/L	EPA 8260B	EPA 5030C
1,4-Dioxane	2.0		1.0	ug/L	EPA 8270C (M) Isotope Dilution	EPA 3510C
UA-02 (16-12-1873-26)						
Trichloroethene	3.2		1.0	ug/L	EPA 8260B	EPA 5030C
UA-0200 (16-12-1873-28)						
Trichloroethene	2.2		1.0	ug/L	EPA 8260B	EPA 5030C
S-07 (16-12-1873-29)						
Trichloroethene	1.4		1.0	ug/L	EPA 8260B	EPA 5030C
HEW-03 (16-12-1873-30)						
1,1-Dichloroethene	3.4		1.0	ug/L	EPA 8260B	EPA 5030C
Tetrachloroethene	1.4		1.0	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	150		1.0	ug/L	EPA 8260B	EPA 5030C
1,4-Dioxane	1.0		1.0	ug/L	EPA 8270C (M) Isotope Dilution	EPA 3510C
S-02 (16-12-1873-31)						
Trichloroethene	2.7		1.0	ug/L	EPA 8260B	EPA 5030C
S-03 (16-12-1873-32)						
Trichloroethene	0.93	J	0.37*	ug/L	EPA 8260B	EPA 5030C
S-32 (16-12-1873-33)						
Trichloroethene	10		1.0	ug/L	EPA 8260B	EPA 5030C
UAX-01 (16-12-1873-35)						
1,1-Dichloroethene	7.7		1.0	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	14		1.0	ug/L	EPA 8260B	EPA 5030C
1,4-Dioxane	1.1		1.0	ug/L	EPA 8270C (M) Isotope Dilution	EPA 3510C
S-04 (16-12-1873-36)						
Tetrachloroethene	0.42	J	0.39*	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	88		1.0	ug/L	EPA 8260B	EPA 5030C
S-0400 (16-12-1873-37)						
Trichloroethene	79		1.0	ug/L	EPA 8260B	EPA 5030C

* MDL is shown

Analytical Report

Hargis + Associates, Inc.	Date Received:	12/19/16
9171 Towne Centre Drive, Suite 375	Work Order:	16-12-1873
San Diego, CA 92122-6215	Preparation:	EPA 3510C
	Method:	EPA 8270C (M) Isotope Dilution
	Units:	ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LAX-01	16-12-1873-2-D	12/19/16 10:00	Aqueous	GC/MS DDD	12/21/16	12/21/16 16:10	161221L11

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
1,4-Dioxane	ND	1.0	0.28	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
Nitrobenzene-d5	96	56-123			
1,4-Dioxane-d8(IDS-IS)	41	30-120			

UAX-03	16-12-1873-5-F	12/19/16 12:30	Aqueous	GC/MS DDD	12/21/16	12/21/16 16:26	161221L11
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
1,4-Dioxane	ND	1.0	0.28	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
Nitrobenzene-d5	93	56-123			
1,4-Dioxane-d8(IDS-IS)	38	30-120			

LAX-02	16-12-1873-11-D	12/19/16 14:00	Aqueous	GC/MS DDD	12/21/16	12/21/16 16:42	161221L11
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
1,4-Dioxane	ND	1.0	0.28	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
Nitrobenzene-d5	95	56-123			
1,4-Dioxane-d8(IDS-IS)	38	30-120			

RB-121916D	16-12-1873-17-D	12/19/16 15:15	Aqueous	GC/MS DDD	12/21/16	12/21/16 16:58	161221L11
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
1,4-Dioxane	ND	1.0	0.28	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
Nitrobenzene-d5	97	56-123			
1,4-Dioxane-d8(IDS-IS)	36	30-120			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 3510C
 Method: EPA 8270C (M) Isotope Dilution
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 2 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LAX-03	16-12-1873-23-D	12/19/16 10:30	Aqueous	GC/MS DDD	12/21/16	12/21/16 17:14	161221L11

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,4-Dioxane	ND	1.0	0.28	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
Nitrobenzene-d5	96	56-123			
1,4-Dioxane-d8(IDS-IS)	43	30-120			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UAX-02	16-12-1873-25-D	12/19/16 11:00	Aqueous	GC/MS DDD	12/21/16	12/21/16 17:30	161221L11

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,4-Dioxane	2.0	1.0	0.28	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
Nitrobenzene-d5	93	56-123			
1,4-Dioxane-d8(IDS-IS)	36	30-120			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
HEW-03	16-12-1873-30-D	12/19/16 13:20	Aqueous	GC/MS DDD	12/21/16	12/21/16 17:46	161221L11

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,4-Dioxane	1.0	1.0	0.28	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
Nitrobenzene-d5	96	56-123			
1,4-Dioxane-d8(IDS-IS)	37	30-120			

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UAX-01	16-12-1873-35-D	12/19/16 15:00	Aqueous	GC/MS DDD	12/21/16	12/21/16 18:03	161221L11

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,4-Dioxane	1.1	1.0	0.28	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
Nitrobenzene-d5	96	56-123			
1,4-Dioxane-d8(IDS-IS)	39	30-120			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.	Date Received:	12/19/16
9171 Towne Centre Drive, Suite 375	Work Order:	16-12-1873
San Diego, CA 92122-6215	Preparation:	EPA 3510C
	Method:	EPA 8270C (M) Isotope Dilution
	Units:	ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-16-216-917	N/A	Aqueous	GC/MS DDD	12/21/16	12/21/16 15:05	161221L11

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
1,4-Dioxane	ND	1.0	0.28	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
Nitrobenzene-d5	101	56-123			
1,4-Dioxane-d8(IDS-IS)	40	30-120			

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 1 of 82

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
TB-121916	16-12-1873-1-A	12/19/16 07:00	Aqueous	GC/MS PP	12/20/16	12/20/16 18:26	161220L032

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 2 of 82

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	ND	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	98	77-120			
Dibromofluoromethane	93	80-128			
1,2-Dichloroethane-d4	101	80-129			
Toluene-d8	99	80-120			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 3 of 82

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LAX-01	16-12-1873-2-A	12/19/16 10:00	Aqueous	GC/MS PP	12/20/16	12/20/16 22:05	161220L032

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 4 of 82

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	ND	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	97	77-120			
Dibromofluoromethane	101	80-128			
1,2-Dichloroethane-d4	104	80-129			
Toluene-d8	98	80-120			



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 5 of 82

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UA-08D	16-12-1873-3-C	12/19/16 11:00	Aqueous	GC/MS PP	12/20/16	12/20/16 18:58	161220L032

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 6 of 82

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	2.0	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	98	77-120			
Dibromofluoromethane	106	80-128			
1,2-Dichloroethane-d4	101	80-129			
Toluene-d8	99	80-120			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 7 of 82

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UA-08	16-12-1873-4-A	12/19/16 11:15	Aqueous	GC/MS PP	12/20/16	12/20/16 22:36	161220L032

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	0.60	1.0	0.43	1.00	J
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 8 of 82

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	12	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	96	77-120			
Dibromofluoromethane	100	80-128			
1,2-Dichloroethane-d4	104	80-129			
Toluene-d8	100	80-120			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 12/19/16
Work Order: 16-12-1873
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 9 of 82

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UAX-03	16-12-1873-5-A	12/19/16 12:30	Aqueous	GC/MS PP	12/20/16	12/21/16 06:23	161220L064

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	0.55	1.0	0.43	1.00	J
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 10 of 82

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	10	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	94	77-120			
Dibromofluoromethane	100	80-128			
1,2-Dichloroethane-d4	103	80-129			
Toluene-d8	98	80-120			



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 11 of 82

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-24	16-12-1873-6-A	12/19/16 12:40	Aqueous	GC/MS PP	12/20/16	12/20/16 23:07	161220L032

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 12 of 82

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	3.2	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	96	77-120			
Dibromofluoromethane	100	80-128			
1,2-Dichloroethane-d4	104	80-129			
Toluene-d8	98	80-120			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 13 of 82

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UA-15D	16-12-1873-7-A	12/19/16 13:00	Aqueous	GC/MS PP	12/20/16	12/20/16 23:38	161220L032

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 14 of 82

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	ND	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	97	77-120			
Dibromofluoromethane	101	80-128			
1,2-Dichloroethane-d4	105	80-129			
Toluene-d8	99	80-120			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 15 of 82

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
RB-121916C	16-12-1873-8-A	12/19/16 13:05	Aqueous	GC/MS PP	12/20/16	12/21/16 00:09	161220L032

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 16 of 82

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	ND	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	96	77-120			
Dibromofluoromethane	100	80-128			
1,2-Dichloroethane-d4	105	80-129			
Toluene-d8	99	80-120			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 17 of 82

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
AB-02	16-12-1873-9-B	12/19/16 13:15	Aqueous	GC/MS PP	12/21/16	12/22/16 06:51	161221L068

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	6.3	1.0	0.48	1.00	
t-1,2-Dichloroethene	17	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 18 of 82

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	1.3	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	15	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	96	77-120			
Dibromofluoromethane	114	80-128			
1,2-Dichloroethane-d4	105	80-129			
Toluene-d8	99	80-120			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 19 of 82

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
AB-0200	16-12-1873-10-B	12/19/16 13:25	Aqueous	GC/MS PP	12/21/16	12/22/16 07:22	161221L068

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	6.1	1.0	0.48	1.00	
t-1,2-Dichloroethene	17	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 20 of 82

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	1.1	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	14	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	96	77-120			
Dibromofluoromethane	115	80-128			
1,2-Dichloroethane-d4	104	80-129			
Toluene-d8	99	80-120			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 21 of 82

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LAX-02	16-12-1873-11-A	12/19/16 14:00	Aqueous	GC/MS PP	12/20/16	12/21/16 07:57	161220L064

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 22 of 82

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	ND	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	97	77-120			
Dibromofluoromethane	100	80-128			
1,2-Dichloroethane-d4	104	80-129			
Toluene-d8	99	80-120			



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 23 of 82

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
AB-01	16-12-1873-12-A	12/19/16 14:20	Aqueous	GC/MS PP	12/20/16	12/21/16 08:28	161220L064

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 24 of 82

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	ND	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	96	77-120			
Dibromofluoromethane	101	80-128			
1,2-Dichloroethane-d4	105	80-129			
Toluene-d8	100	80-120			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 25 of 82

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-26	16-12-1873-13-A	12/19/16 14:30	Aqueous	GC/MS PP	12/21/16	12/21/16 19:26	161221L044

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 26 of 82

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	ND	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	96	77-120			
Dibromofluoromethane	97	80-128			
1,2-Dichloroethane-d4	106	80-129			
Toluene-d8	99	80-120			



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 27 of 82

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UA-06D	16-12-1873-14-A	12/19/16 14:45	Aqueous	GC/MS PP	12/20/16	12/21/16 08:59	161220L064

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 28 of 82

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	2.5	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	ND	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	97	77-120	
Dibromofluoromethane	100	80-128	
1,2-Dichloroethane-d4	102	80-129	
Toluene-d8	100	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 29 of 82

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UA-06	16-12-1873-15-A	12/19/16 14:55	Aqueous	GC/MS PP	12/20/16	12/21/16 09:30	161220L064

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 30 of 82

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	2.5	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	0.79	1.0	0.37	1.00	J
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	96	77-120	
Dibromofluoromethane	102	80-128	
1,2-Dichloroethane-d4	105	80-129	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 31 of 82

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UA-0600	16-12-1873-16-A	12/19/16 15:00	Aqueous	GC/MS PP	12/20/16	12/21/16 10:01	161220L064

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 32 of 82

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	2.8	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	1.5	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	96	77-120			
Dibromofluoromethane	99	80-128			
1,2-Dichloroethane-d4	105	80-129			
Toluene-d8	99	80-120			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 33 of 82

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
RB-121916D	16-12-1873-17-A	12/19/16 15:15	Aqueous	GC/MS PP	12/20/16	12/21/16 10:32	161220L064

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 34 of 82

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	ND	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	97	77-120	
Dibromofluoromethane	98	80-128	
1,2-Dichloroethane-d4	104	80-129	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 35 of 82

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UA-07D	16-12-1873-18-A	12/19/16 15:30	Aqueous	GC/MS PP	12/20/16	12/21/16 11:04	161220L064

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	1.0	1.0	0.28	1.00	J
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 36 of 82

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	0.84	1.0	0.39	1.00	J
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	ND	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	98	77-120	
Dibromofluoromethane	99	80-128	
1,2-Dichloroethane-d4	104	80-129	
Toluene-d8	100	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 37 of 82

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UA-07	16-12-1873-19-A	12/19/16 15:40	Aqueous	GC/MS PP	12/21/16	12/22/16 06:20	161221L068

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	3.5	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 38 of 82

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	2.2	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	96	77-120			
Dibromofluoromethane	97	80-128			
1,2-Dichloroethane-d4	106	80-129			
Toluene-d8	99	80-120			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 39 of 82

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-27	16-12-1873-20-A	12/19/16 08:40	Aqueous	GC/MS PP	12/20/16	12/21/16 11:35	161220L064

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 40 of 82

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	ND	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	97	77-120			
Dibromofluoromethane	100	80-128			
1,2-Dichloroethane-d4	104	80-129			
Toluene-d8	99	80-120			



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 41 of 82

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-15	16-12-1873-21-A	12/19/16 09:15	Aqueous	GC/MS PP	12/20/16	12/21/16 12:06	161220L064

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 42 of 82

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	2.1	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	96	77-120			
Dibromofluoromethane	98	80-128			
1,2-Dichloroethane-d4	104	80-129			
Toluene-d8	99	80-120			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 43 of 82

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-14	16-12-1873-22-A	12/19/16 09:40	Aqueous	GC/MS PP	12/20/16	12/21/16 12:37	161220L064

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 44 of 82

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	0.52	1.0	0.37	1.00	J
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	97	77-120	
Dibromofluoromethane	99	80-128	
1,2-Dichloroethane-d4	106	80-129	
Toluene-d8	100	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 45 of 82

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
LAX-03	16-12-1873-23-A	12/19/16 10:30	Aqueous	GC/MS PP	12/20/16	12/21/16 13:08	161220L064

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	0.49	1.0	0.43	1.00	J
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 46 of 82

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	0.73	1.0	0.37	1.00	J
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	95	77-120	
Dibromofluoromethane	99	80-128	
1,2-Dichloroethane-d4	103	80-129	
Toluene-d8	100	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 47 of 82

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
AB-03	16-12-1873-24-A	12/19/16 10:40	Aqueous	GC/MS PP	12/20/16	12/21/16 13:39	161220L064

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 48 of 82

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	ND	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	96	77-120			
Dibromofluoromethane	101	80-128			
1,2-Dichloroethane-d4	104	80-129			
Toluene-d8	99	80-120			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 49 of 82

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UAX-02	16-12-1873-25-A	12/19/16 11:00	Aqueous	GC/MS PP	12/20/16	12/21/16 14:10	161220L064

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	0.39	1.0	0.28	1.00	J
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	16	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 50 of 82

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	5.2	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	96	77-120			
Dibromofluoromethane	98	80-128			
1,2-Dichloroethane-d4	104	80-129			
Toluene-d8	100	80-120			



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 51 of 82

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UA-02	16-12-1873-26-A	12/19/16 12:30	Aqueous	GC/MS PP	12/21/16	12/21/16 19:58	161221L044

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 52 of 82

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	3.2	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	95	77-120			
Dibromofluoromethane	98	80-128			
1,2-Dichloroethane-d4	106	80-129			
Toluene-d8	99	80-120			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 53 of 82

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
RB-121916A	16-12-1873-27-A	12/19/16 12:40	Aqueous	GC/MS PP	12/21/16	12/21/16 20:29	161221L044

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 54 of 82

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	ND	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	97	77-120			
Dibromofluoromethane	98	80-128			
1,2-Dichloroethane-d4	104	80-129			
Toluene-d8	99	80-120			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 55 of 82

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UA-0200	16-12-1873-28-A	12/19/16 12:45	Aqueous	GC/MS PP	12/21/16	12/21/16 21:00	161221L044

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 56 of 82

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	2.2	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	96	77-120			
Dibromofluoromethane	96	80-128			
1,2-Dichloroethane-d4	104	80-129			
Toluene-d8	99	80-120			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 57 of 82

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-07	16-12-1873-29-A	12/19/16 12:50	Aqueous	GC/MS PP	12/21/16	12/21/16 21:31	161221L044

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 58 of 82

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	1.4	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	96	77-120			
Dibromofluoromethane	96	80-128			
1,2-Dichloroethane-d4	105	80-129			
Toluene-d8	99	80-120			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 59 of 82

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
HEW-03	16-12-1873-30-A	12/19/16 13:20	Aqueous	GC/MS PP	12/21/16	12/21/16 22:02	161221L044

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	3.4	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 60 of 82

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	1.4	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	150	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	96	77-120			
Dibromofluoromethane	95	80-128			
1,2-Dichloroethane-d4	104	80-129			
Toluene-d8	100	80-120			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 61 of 82

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-02	16-12-1873-31-A	12/19/16 13:45	Aqueous	GC/MS PP	12/21/16	12/21/16 22:33	161221L044

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 62 of 82

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	2.7	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	95	77-120			
Dibromofluoromethane	97	80-128			
1,2-Dichloroethane-d4	104	80-129			
Toluene-d8	100	80-120			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 63 of 82

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-03	16-12-1873-32-A	12/19/16 14:00	Aqueous	GC/MS PP	12/21/16	12/21/16 23:04	161221L044

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 64 of 82

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	0.93	1.0	0.37	1.00	J
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	95	77-120	
Dibromofluoromethane	97	80-128	
1,2-Dichloroethane-d4	106	80-129	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 65 of 82

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-32	16-12-1873-33-A	12/19/16 14:20	Aqueous	GC/MS PP	12/21/16	12/21/16 23:36	161221L044

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 66 of 82

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	10	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	96	77-120			
Dibromofluoromethane	97	80-128			
1,2-Dichloroethane-d4	106	80-129			
Toluene-d8	99	80-120			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 67 of 82

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UA-04D	16-12-1873-34-A	12/19/16 14:45	Aqueous	GC/MS PP	12/21/16	12/22/16 00:07	161221L044

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 68 of 82

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	ND	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	95	77-120			
Dibromofluoromethane	98	80-128			
1,2-Dichloroethane-d4	105	80-129			
Toluene-d8	99	80-120			



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 69 of 82

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UAX-01	16-12-1873-35-A	12/19/16 15:00	Aqueous	GC/MS PP	12/21/16	12/22/16 00:38	161221L044

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	7.7	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 70 of 82

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	14	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	95	77-120			
Dibromofluoromethane	98	80-128			
1,2-Dichloroethane-d4	105	80-129			
Toluene-d8	100	80-120			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 71 of 82

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-04	16-12-1873-36-A	12/19/16 15:25	Aqueous	GC/MS PP	12/21/16	12/22/16 01:09	161221L044

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 72 of 82

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	0.42	1.0	0.39	1.00	J
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	88	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	96	77-120			
Dibromofluoromethane	98	80-128			
1,2-Dichloroethane-d4	105	80-129			
Toluene-d8	99	80-120			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 73 of 82

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-0400	16-12-1873-37-A	12/19/16 15:40	Aqueous	GC/MS PP	12/21/16	12/22/16 01:40	161221L044

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 74 of 82

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	79	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	95	77-120			
Dibromofluoromethane	98	80-128			
1,2-Dichloroethane-d4	105	80-129			
Toluene-d8	100	80-120			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 75 of 82

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-001-22144	N/A	Aqueous	GC/MS PP	12/20/16	12/20/16 17:55	161220L032

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 76 of 82

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	ND	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	98	77-120			
Dibromofluoromethane	96	80-128			
1,2-Dichloroethane-d4	101	80-129			
Toluene-d8	98	80-120			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 77 of 82

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-001-22156	N/A	Aqueous	GC/MS PP	12/20/16	12/21/16 05:52	161220L064

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 78 of 82

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	ND	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	98	77-120	
Dibromofluoromethane	99	80-128	
1,2-Dichloroethane-d4	102	80-129	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 79 of 82

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-001-22158	N/A	Aqueous	GC/MS PP	12/21/16	12/21/16 18:55	161221L044

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 80 of 82

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	ND	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	98	77-120			
Dibromofluoromethane	96	80-128			
1,2-Dichloroethane-d4	104	80-129			
Toluene-d8	99	80-120			



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 81 of 82

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-001-22169	N/A	Aqueous	GC/MS PP	12/21/16	12/22/16 05:49	161221L068

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 82 of 82

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	ND	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	96	77-120			
Dibromofluoromethane	97	80-128			
1,2-Dichloroethane-d4	104	80-129			
Toluene-d8	100	80-120			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Quality Control - Spike/Spike Duplicate

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 12/19/16
Work Order: 16-12-1873
Preparation: EPA 3510C
Method: EPA 8270C (M) Isotope Dilution

Project: Building 684 - Raytheon Task No. 764.10

Page 1 of 9

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
UAX-03	Sample	Aqueous	GC/MS DDD	12/21/16	12/21/16 16:26	161221S11
UAX-03	Matrix Spike	Aqueous	GC/MS DDD	12/21/16	12/21/16 15:38	161221S11
UAX-03	Matrix Spike Duplicate	Aqueous	GC/MS DDD	12/21/16	12/21/16 15:54	161221S11

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
1,4-Dioxane	ND	20.00	20.51	103	19.50	98	50-130	5	0-20	


 Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 12/19/16
Work Order: 16-12-1873
Preparation: EPA 5030C
Method: EPA 8260B

Project: Building 684 - Raytheon Task No. 764.10

Page 2 of 9

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
UA-08D	Sample	Aqueous	GC/MS PP	12/20/16	12/20/16 18:58	161220S014
UA-08D	Matrix Spike	Aqueous	GC/MS PP	12/20/16	12/20/16 15:14	161220S014
UA-08D	Matrix Spike Duplicate	Aqueous	GC/MS PP	12/20/16	12/20/16 15:45	161220S014

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Acetone	ND	50.00	39.76	80	40.84	82	34-166	3	0-33	
Benzene	ND	50.00	48.48	97	49.84	100	75-125	3	0-20	
Bromobenzene	ND	50.00	48.33	97	49.82	100	75-125	3	0-20	
Bromochloromethane	ND	50.00	47.62	95	48.11	96	75-125	1	0-20	
Bromodichloromethane	ND	50.00	48.21	96	49.83	100	75-134	3	0-20	
Bromoform	ND	50.00	47.93	96	51.07	102	74-134	6	0-20	
Bromomethane	ND	50.00	32.66	65	31.67	63	20-168	3	0-40	
2-Butanone	ND	50.00	41.62	83	46.30	93	37-157	11	0-20	
n-Butylbenzene	ND	50.00	54.91	110	56.11	112	73-145	2	0-20	
sec-Butylbenzene	ND	50.00	54.67	109	56.03	112	75-135	2	0-20	
tert-Butylbenzene	ND	50.00	57.40	115	59.82	120	75-136	4	0-20	
Carbon Disulfide	ND	50.00	47.03	94	47.91	96	50-152	2	0-27	
Carbon Tetrachloride	ND	50.00	49.83	100	49.41	99	70-154	1	0-20	
Chlorobenzene	ND	50.00	47.88	96	49.42	99	75-125	3	0-20	
Chloroethane	ND	50.00	53.08	106	50.42	101	41-167	5	0-26	
Chloroform	ND	50.00	47.11	94	48.05	96	75-127	2	0-20	
Chloromethane	ND	50.00	48.82	98	47.36	95	41-149	3	0-20	
2-Chlorotoluene	ND	50.00	49.87	100	50.97	102	75-128	2	0-20	
4-Chlorotoluene	ND	50.00	50.66	101	52.75	105	75-125	4	0-20	
Dibromochloromethane	ND	50.00	47.74	95	50.12	100	75-131	5	0-20	
1,2-Dibromo-3-Chloropropane	ND	50.00	46.63	93	49.15	98	64-142	5	0-20	
1,2-Dibromoethane	ND	50.00	47.75	95	50.25	100	75-129	5	0-20	
Dibromomethane	ND	50.00	45.89	92	47.84	96	75-125	4	0-20	
1,2-Dichlorobenzene	ND	50.00	49.29	99	50.44	101	75-125	2	0-20	
1,3-Dichlorobenzene	ND	50.00	49.20	98	51.01	102	75-125	4	0-20	
1,4-Dichlorobenzene	ND	50.00	48.14	96	49.62	99	75-125	3	0-20	
Dichlorodifluoromethane	ND	50.00	56.03	112	54.97	110	25-157	2	0-26	
1,1-Dichloroethane	ND	50.00	48.52	97	49.03	98	73-139	1	0-20	
1,2-Dichloroethane	ND	50.00	46.50	93	49.00	98	75-125	5	0-20	
1,1-Dichloroethene	ND	50.00	49.10	98	49.07	98	61-145	0	0-20	
c-1,2-Dichloroethene	ND	50.00	49.00	98	49.74	99	75-125	1	0-20	
t-1,2-Dichloroethene	ND	50.00	49.01	98	50.10	100	64-142	2	0-20	
1,2-Dichloropropane	ND	50.00	49.34	99	50.85	102	75-127	3	0-20	
1,3-Dichloropropane	ND	50.00	46.90	94	49.30	99	75-125	5	0-20	
2,2-Dichloropropane	ND	50.00	60.98	122	60.55	121	24-180	1	0-20	

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 12/19/16
Work Order: 16-12-1873
Preparation: EPA 5030C
Method: EPA 8260B

Project: Building 684 - Raytheon Task No. 764.10

Page 3 of 9

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
1,1-Dichloropropene	ND	50.00	50.55	101	51.43	103	75-135	2	0-20	
c-1,3-Dichloropropene	ND	50.00	44.18	88	45.62	91	75-137	3	0-20	
t-1,3-Dichloropropene	ND	50.00	44.43	89	45.68	91	74-146	3	0-20	
Ethylbenzene	ND	50.00	50.34	101	52.22	104	75-129	4	0-20	
2-Hexanone	ND	50.00	46.88	94	51.08	102	47-161	9	0-20	
Isopropylbenzene	ND	50.00	52.80	106	53.89	108	75-135	2	0-20	
p-Isopropyltoluene	ND	50.00	53.87	108	55.25	111	75-136	3	0-20	
Methylene Chloride	ND	50.00	45.76	92	44.91	90	63-141	2	0-20	
4-Methyl-2-Pentanone	ND	50.00	46.10	92	50.55	101	66-138	9	0-20	
Naphthalene	ND	50.00	47.72	95	48.57	97	59-143	2	0-20	
n-Propylbenzene	ND	50.00	50.81	102	52.09	104	75-133	2	0-20	
Styrene	ND	50.00	51.21	102	52.57	105	70-142	3	0-28	
1,1,1,2-Tetrachloroethane	ND	50.00	49.97	100	52.70	105	75-139	5	0-20	
1,1,2,2-Tetrachloroethane	ND	50.00	59.66	119	66.52	133	61-145	11	0-20	
Tetrachloroethene	ND	50.00	31.27	63	31.96	64	47-143	2	0-20	
Toluene	ND	50.00	48.64	97	49.94	100	75-125	3	0-20	
1,2,3-Trichlorobenzene	ND	50.00	49.79	100	50.68	101	73-133	2	0-20	
1,2,4-Trichlorobenzene	ND	50.00	52.52	105	52.83	106	71-137	1	0-20	
1,1,1-Trichloroethane	ND	50.00	50.08	100	50.89	102	75-136	2	0-20	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50.00	53.72	107	54.93	110	42-168	2	0-22	
1,1,2-Trichloroethane	ND	50.00	46.78	94	49.52	99	75-125	6	0-20	
Trichloroethene	2.048	50.00	45.03	86	46.41	89	67-139	3	0-20	
Trichlorofluoromethane	ND	50.00	52.68	105	53.40	107	59-155	1	0-20	
1,2,3-Trichloropropane	ND	50.00	43.00	86	44.07	88	75-127	2	0-20	
1,2,4-Trimethylbenzene	ND	50.00	51.05	102	52.92	106	75-133	4	0-20	
1,3,5-Trimethylbenzene	ND	50.00	51.74	103	51.88	104	75-135	0	0-20	
Vinyl Acetate	ND	50.00	69.75	140	78.04	156	54-180	11	0-25	
Vinyl Chloride	ND	50.00	51.79	104	50.10	100	51-153	3	0-20	
p/m-Xylene	ND	100.0	101.5	102	104.8	105	75-133	3	0-20	
o-Xylene	ND	50.00	52.36	105	53.76	108	75-134	3	0-20	
Methyl-t-Butyl Ether (MTBE)	ND	50.00	48.51	97	51.05	102	64-136	5	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 12/19/16
Work Order: 16-12-1873
Preparation: EPA 5030C
Method: EPA 8260B

Project: Building 684 - Raytheon Task No. 764.10

Page 4 of 9

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
UAX-03	Sample	Aqueous	GC/MS PP	12/20/16	12/21/16 06:23	161220S032
UAX-03	Matrix Spike	Aqueous	GC/MS PP	12/20/16	12/21/16 03:47	161220S032
UAX-03	Matrix Spike Duplicate	Aqueous	GC/MS PP	12/20/16	12/21/16 04:19	161220S032

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Acetone	ND	50.00	46.27	93	45.47	91	34-166	2	0-33	
Benzene	ND	50.00	49.00	98	48.39	97	75-125	1	0-20	
Bromobenzene	ND	50.00	48.70	97	48.11	96	75-125	1	0-20	
Bromochloromethane	ND	50.00	49.10	98	47.36	95	75-125	4	0-20	
Bromodichloromethane	ND	50.00	49.58	99	49.10	98	75-134	1	0-20	
Bromoform	ND	50.00	49.13	98	50.72	101	74-134	3	0-20	
Bromomethane	ND	50.00	37.53	75	35.75	72	20-168	5	0-40	
2-Butanone	ND	50.00	43.18	86	43.48	87	37-157	1	0-20	
n-Butylbenzene	ND	50.00	52.54	105	52.27	105	73-145	1	0-20	
sec-Butylbenzene	ND	50.00	53.28	107	53.56	107	75-135	1	0-20	
tert-Butylbenzene	ND	50.00	55.78	112	56.19	112	75-136	1	0-20	
Carbon Disulfide	ND	50.00	42.66	85	43.23	86	50-152	1	0-27	
Carbon Tetrachloride	ND	50.00	46.82	94	47.27	95	70-154	1	0-20	
Chlorobenzene	ND	50.00	47.96	96	47.60	95	75-125	1	0-20	
Chloroethane	ND	50.00	52.63	105	53.23	106	41-167	1	0-26	
Chloroform	ND	50.00	48.23	96	47.41	95	75-127	2	0-20	
Chloromethane	ND	50.00	49.98	100	47.29	95	41-149	6	0-20	
2-Chlorotoluene	ND	50.00	50.16	100	49.54	99	75-128	1	0-20	
4-Chlorotoluene	ND	50.00	51.01	102	51.79	104	75-125	2	0-20	
Dibromochloromethane	ND	50.00	48.77	98	48.16	96	75-131	1	0-20	
1,2-Dibromo-3-Chloropropane	ND	50.00	46.97	94	47.42	95	64-142	1	0-20	
1,2-Dibromoethane	ND	50.00	48.87	98	48.49	97	75-129	1	0-20	
Dibromomethane	ND	50.00	47.71	95	46.59	93	75-125	2	0-20	
1,2-Dichlorobenzene	ND	50.00	50.06	100	50.12	100	75-125	0	0-20	
1,3-Dichlorobenzene	ND	50.00	49.06	98	49.67	99	75-125	1	0-20	
1,4-Dichlorobenzene	ND	50.00	47.82	96	48.52	97	75-125	1	0-20	
Dichlorodifluoromethane	ND	50.00	40.62	81	38.84	78	25-157	4	0-26	
1,1-Dichloroethane	ND	50.00	49.13	98	48.20	96	73-139	2	0-20	
1,2-Dichloroethane	ND	50.00	48.38	97	47.56	95	75-125	2	0-20	
1,1-Dichloroethene	ND	50.00	48.55	97	48.26	97	61-145	1	0-20	
c-1,2-Dichloroethene	ND	50.00	49.08	98	48.63	97	75-125	1	0-20	
t-1,2-Dichloroethene	ND	50.00	48.87	98	47.86	96	64-142	2	0-20	
1,2-Dichloropropane	ND	50.00	50.17	100	50.02	100	75-127	0	0-20	
1,3-Dichloropropane	ND	50.00	47.79	96	47.36	95	75-125	1	0-20	
2,2-Dichloropropane	ND	50.00	40.21	80	39.44	79	24-180	2	0-20	

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 12/19/16
Work Order: 16-12-1873
Preparation: EPA 5030C
Method: EPA 8260B

Project: Building 684 - Raytheon Task No. 764.10

Page 5 of 9

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
1,1-Dichloropropene	ND	50.00	48.76	98	49.07	98	75-135	1	0-20	
c-1,3-Dichloropropene	ND	50.00	42.25	84	41.95	84	75-137	1	0-20	
t-1,3-Dichloropropene	ND	50.00	42.47	85	42.24	84	74-146	1	0-20	
Ethylbenzene	ND	50.00	50.28	101	50.28	101	75-129	0	0-20	
2-Hexanone	ND	50.00	45.33	91	45.00	90	47-161	1	0-20	
Isopropylbenzene	ND	50.00	52.18	104	52.06	104	75-135	0	0-20	
p-Isopropyltoluene	ND	50.00	52.31	105	52.63	105	75-136	1	0-20	
Methylene Chloride	ND	50.00	46.42	93	45.34	91	63-141	2	0-20	
4-Methyl-2-Pentanone	ND	50.00	45.82	92	45.64	91	66-138	0	0-20	
Naphthalene	ND	50.00	49.31	99	46.18	92	59-143	7	0-20	
n-Propylbenzene	ND	50.00	50.93	102	50.03	100	75-133	2	0-20	
Styrene	ND	50.00	46.62	93	45.17	90	70-142	3	0-28	
1,1,1,2-Tetrachloroethane	ND	50.00	51.11	102	50.82	102	75-139	1	0-20	
1,1,2,2-Tetrachloroethane	ND	50.00	57.74	115	60.59	121	61-145	5	0-20	
Tetrachloroethene	ND	50.00	36.31	73	36.45	73	47-143	0	0-20	
Toluene	ND	50.00	48.80	98	48.65	97	75-125	0	0-20	
1,2,3-Trichlorobenzene	ND	50.00	50.18	100	48.03	96	73-133	4	0-20	
1,2,4-Trichlorobenzene	ND	50.00	51.79	104	49.39	99	71-137	5	0-20	
1,1,1-Trichloroethane	ND	50.00	49.12	98	49.12	98	75-136	0	0-20	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50.00	40.70	81	41.27	83	42-168	1	0-22	
1,1,2-Trichloroethane	ND	50.00	47.90	96	47.68	95	75-125	0	0-20	
Trichloroethene	10.45	50.00	54.59	88	54.77	89	67-139	0	0-20	
Trichlorofluoromethane	ND	50.00	46.97	94	47.30	95	59-155	1	0-20	
1,2,3-Trichloropropane	ND	50.00	46.09	92	45.79	92	75-127	1	0-20	
1,2,4-Trimethylbenzene	ND	50.00	51.22	102	51.59	103	75-133	1	0-20	
1,3,5-Trimethylbenzene	ND	50.00	51.29	103	50.00	100	75-135	3	0-20	
Vinyl Acetate	ND	50.00	56.40	113	52.41	105	54-180	7	0-25	
Vinyl Chloride	ND	50.00	51.34	103	49.92	100	51-153	3	0-20	
p/m-Xylene	ND	100.0	101.9	102	100.8	101	75-133	1	0-20	
o-Xylene	ND	50.00	53.05	106	52.44	105	75-134	1	0-20	
Methyl-t-Butyl Ether (MTBE)	ND	50.00	48.73	97	48.65	97	64-136	0	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 12/19/16
Work Order: 16-12-1873
Preparation: EPA 5030C
Method: EPA 8260B

Project: Building 684 - Raytheon Task No. 764.10

Page 6 of 9

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
S-26	Sample	Aqueous	GC/MS PP	12/21/16	12/21/16 19:26	161221S017
S-26	Matrix Spike	Aqueous	GC/MS PP	12/21/16	12/21/16 16:50	161221S017
S-26	Matrix Spike Duplicate	Aqueous	GC/MS PP	12/21/16	12/21/16 17:22	161221S017

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Acetone	ND	50.00	40.23	80	41.47	83	34-166	3	0-33	
Benzene	ND	50.00	51.33	103	48.21	96	75-125	6	0-20	
Bromobenzene	ND	50.00	51.60	103	48.87	98	75-125	5	0-20	
Bromochloromethane	ND	50.00	49.10	98	46.56	93	75-125	5	0-20	
Bromodichloromethane	ND	50.00	51.80	104	48.38	97	75-134	7	0-20	
Bromoform	ND	50.00	49.23	98	48.31	97	74-134	2	0-20	
Bromomethane	ND	50.00	41.00	82	38.48	77	20-168	6	0-40	
2-Butanone	ND	50.00	41.78	84	43.84	88	37-157	5	0-20	
n-Butylbenzene	ND	50.00	62.88	126	55.43	111	73-145	13	0-20	
sec-Butylbenzene	ND	50.00	60.07	120	54.57	109	75-135	10	0-20	
tert-Butylbenzene	ND	50.00	59.82	120	56.26	113	75-136	6	0-20	
Carbon Disulfide	ND	50.00	44.99	90	42.09	84	50-152	7	0-27	
Carbon Tetrachloride	ND	50.00	51.85	104	48.28	97	70-154	7	0-20	
Chlorobenzene	ND	50.00	50.82	102	47.61	95	75-125	7	0-20	
Chloroethane	ND	50.00	53.49	107	54.66	109	41-167	2	0-26	
Chloroform	ND	50.00	49.68	99	47.05	94	75-127	5	0-20	
Chloromethane	ND	50.00	50.59	101	52.56	105	41-149	4	0-20	
2-Chlorotoluene	ND	50.00	54.32	109	50.53	101	75-128	7	0-20	
4-Chlorotoluene	ND	50.00	56.20	112	51.21	102	75-125	9	0-20	
Dibromochloromethane	ND	50.00	49.85	100	47.64	95	75-131	5	0-20	
1,2-Dibromo-3-Chloropropane	ND	50.00	44.42	89	47.57	95	64-142	7	0-20	
1,2-Dibromoethane	ND	50.00	49.09	98	47.62	95	75-129	3	0-20	
Dibromomethane	ND	50.00	48.63	97	45.66	91	75-125	6	0-20	
1,2-Dichlorobenzene	ND	50.00	53.22	106	49.97	100	75-125	6	0-20	
1,3-Dichlorobenzene	ND	50.00	53.90	108	49.24	98	75-125	9	0-20	
1,4-Dichlorobenzene	ND	50.00	52.87	106	48.18	96	75-125	9	0-20	
Dichlorodifluoromethane	ND	50.00	55.04	110	57.06	114	25-157	4	0-26	
1,1-Dichloroethane	ND	50.00	50.53	101	47.66	95	73-139	6	0-20	
1,2-Dichloroethane	ND	50.00	50.42	101	46.88	94	75-125	7	0-20	
1,1-Dichloroethene	ND	50.00	51.75	104	48.19	96	61-145	7	0-20	
c-1,2-Dichloroethene	ND	50.00	51.23	102	48.13	96	75-125	6	0-20	
t-1,2-Dichloroethene	ND	50.00	51.00	102	47.29	95	64-142	8	0-20	
1,2-Dichloropropane	ND	50.00	52.04	104	48.91	98	75-127	6	0-20	
1,3-Dichloropropane	ND	50.00	48.65	97	47.15	94	75-125	3	0-20	
2,2-Dichloropropane	ND	50.00	60.61	121	54.79	110	24-180	10	0-20	

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 12/19/16
Work Order: 16-12-1873
Preparation: EPA 5030C
Method: EPA 8260B

Project: Building 684 - Raytheon Task No. 764.10

Page 7 of 9

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
1,1-Dichloropropene	ND	50.00	53.04	106	49.36	99	75-135	7	0-20	
c-1,3-Dichloropropene	ND	50.00	45.93	92	42.84	86	75-137	7	0-20	
t-1,3-Dichloropropene	ND	50.00	45.92	92	43.59	87	74-146	5	0-20	
Ethylbenzene	ND	50.00	54.19	108	50.47	101	75-129	7	0-20	
2-Hexanone	ND	50.00	44.31	89	46.28	93	47-161	4	0-20	
Isopropylbenzene	ND	50.00	57.28	115	52.74	105	75-135	8	0-20	
p-Isopropyltoluene	ND	50.00	59.71	119	53.99	108	75-136	10	0-20	
Methylene Chloride	ND	50.00	47.86	96	46.12	92	63-141	4	0-20	
4-Methyl-2-Pentanone	ND	50.00	44.37	89	45.66	91	66-138	3	0-20	
Naphthalene	ND	50.00	49.80	100	50.63	101	59-143	2	0-20	
n-Propylbenzene	ND	50.00	57.12	114	51.91	104	75-133	10	0-20	
Styrene	ND	50.00	55.36	111	50.73	101	70-142	9	0-28	
1,1,1,2-Tetrachloroethane	ND	50.00	53.34	107	50.10	100	75-139	6	0-20	
1,1,2,2-Tetrachloroethane	ND	50.00	56.16	112	56.12	112	61-145	0	0-20	
Tetrachloroethene	ND	50.00	42.60	85	38.26	77	47-143	11	0-20	
Toluene	ND	50.00	51.75	104	48.43	97	75-125	7	0-20	
1,2,3-Trichlorobenzene	ND	50.00	55.33	111	52.08	104	73-133	6	0-20	
1,2,4-Trichlorobenzene	ND	50.00	58.07	116	53.45	107	71-137	8	0-20	
1,1,1-Trichloroethane	ND	50.00	51.60	103	48.91	98	75-136	5	0-20	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50.00	60.92	122	53.47	107	42-168	13	0-22	
1,1,2-Trichloroethane	ND	50.00	49.25	99	47.43	95	75-125	4	0-20	
Trichloroethene	ND	50.00	47.44	95	43.63	87	67-139	8	0-20	
Trichlorofluoromethane	ND	50.00	53.79	108	54.51	109	59-155	1	0-20	
1,2,3-Trichloropropane	ND	50.00	46.71	93	46.64	93	75-127	0	0-20	
1,2,4-Trimethylbenzene	ND	50.00	56.35	113	51.14	102	75-133	10	0-20	
1,3,5-Trimethylbenzene	ND	50.00	56.77	114	51.68	103	75-135	9	0-20	
Vinyl Acetate	ND	50.00	72.87	146	68.36	137	54-180	6	0-25	
Vinyl Chloride	ND	50.00	52.54	105	54.49	109	51-153	4	0-20	
p/m-Xylene	ND	100.0	110.2	110	102.2	102	75-133	8	0-20	
o-Xylene	ND	50.00	56.46	113	52.72	105	75-134	7	0-20	
Methyl-t-Butyl Ether (MTBE)	ND	50.00	48.54	97	47.35	95	64-136	2	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 12/19/16
Work Order: 16-12-1873
Preparation: EPA 5030C
Method: EPA 8260B

Project: Building 684 - Raytheon Task No. 764.10

Page 8 of 9

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
UA-07	Sample	Aqueous	GC/MS PP	12/21/16	12/22/16 06:20	161221S032
UA-07	Matrix Spike	Aqueous	GC/MS PP	12/21/16	12/22/16 13:15	161221S032
UA-07	Matrix Spike Duplicate	Aqueous	GC/MS PP	12/21/16	12/22/16 13:46	161221S032

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Acetone	ND	50.00	37.53	75	40.30	81	34-166	7	0-33	
Benzene	ND	50.00	49.65	99	51.61	103	75-125	4	0-20	
Bromobenzene	ND	50.00	49.34	99	49.76	100	75-125	1	0-20	
Bromochloromethane	ND	50.00	49.42	99	50.06	100	75-125	1	0-20	
Bromodichloromethane	ND	50.00	49.84	100	50.43	101	75-134	1	0-20	
Bromoform	ND	50.00	45.42	91	48.87	98	74-134	7	0-20	
Bromomethane	ND	50.00	42.04	84	39.15	78	20-168	7	0-40	
2-Butanone	ND	50.00	39.35	79	43.89	88	37-157	11	0-20	
n-Butylbenzene	ND	50.00	58.57	117	58.13	116	73-145	1	0-20	
sec-Butylbenzene	ND	50.00	55.02	110	56.55	113	75-135	3	0-20	
tert-Butylbenzene	ND	50.00	55.75	111	57.94	116	75-136	4	0-20	
Carbon Disulfide	ND	50.00	47.89	96	48.91	98	50-152	2	0-27	
Carbon Tetrachloride	ND	50.00	50.14	100	52.35	105	70-154	4	0-20	
Chlorobenzene	ND	50.00	48.71	97	49.72	99	75-125	2	0-20	
Chloroethane	ND	50.00	53.99	108	56.29	113	41-167	4	0-26	
Chloroform	ND	50.00	48.42	97	50.19	100	75-127	4	0-20	
Chloromethane	ND	50.00	48.68	97	52.56	105	41-149	8	0-20	
2-Chlorotoluene	ND	50.00	52.50	105	52.36	105	75-128	0	0-20	
4-Chlorotoluene	ND	50.00	52.00	104	52.91	106	75-125	2	0-20	
Dibromochloromethane	ND	50.00	48.29	97	49.95	100	75-131	3	0-20	
1,2-Dibromo-3-Chloropropane	ND	50.00	38.88	78	43.97	88	64-142	12	0-20	
1,2-Dibromoethane	ND	50.00	46.86	94	48.92	98	75-129	4	0-20	
Dibromomethane	ND	50.00	48.64	97	49.44	99	75-125	2	0-20	
1,2-Dichlorobenzene	ND	50.00	50.31	101	51.10	102	75-125	2	0-20	
1,3-Dichlorobenzene	ND	50.00	50.83	102	51.37	103	75-125	1	0-20	
1,4-Dichlorobenzene	ND	50.00	49.54	99	49.93	100	75-125	1	0-20	
Dichlorodifluoromethane	ND	50.00	51.39	103	56.34	113	25-157	9	0-26	
1,1-Dichloroethane	3.473	50.00	51.95	97	53.99	101	73-139	4	0-20	
1,2-Dichloroethane	ND	50.00	49.16	98	49.56	99	75-125	1	0-20	
1,1-Dichloroethene	ND	50.00	51.61	103	53.63	107	61-145	4	0-20	
c-1,2-Dichloroethene	ND	50.00	50.02	100	51.78	104	75-125	3	0-20	
t-1,2-Dichloroethene	ND	50.00	48.58	97	51.35	103	64-142	6	0-20	
1,2-Dichloropropane	ND	50.00	50.75	101	51.21	102	75-127	1	0-20	
1,3-Dichloropropane	ND	50.00	46.74	93	48.19	96	75-125	3	0-20	
2,2-Dichloropropane	ND	50.00	59.45	119	61.14	122	24-180	3	0-20	

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 12/19/16
Work Order: 16-12-1873
Preparation: EPA 5030C
Method: EPA 8260B

Project: Building 684 - Raytheon Task No. 764.10

Page 9 of 9

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
1,1-Dichloropropene	ND	50.00	51.58	103	52.96	106	75-135	3	0-20	
c-1,3-Dichloropropene	ND	50.00	45.54	91	46.15	92	75-137	1	0-20	
t-1,3-Dichloropropene	ND	50.00	44.46	89	45.23	90	74-146	2	0-20	
Ethylbenzene	ND	50.00	52.43	105	53.26	107	75-129	2	0-20	
2-Hexanone	ND	50.00	38.81	78	43.39	87	47-161	11	0-20	
Isopropylbenzene	ND	50.00	54.19	108	55.15	110	75-135	2	0-20	
p-Isopropyltoluene	ND	50.00	55.08	110	55.39	111	75-136	1	0-20	
Methylene Chloride	ND	50.00	48.92	98	49.23	98	63-141	1	0-20	
4-Methyl-2-Pentanone	ND	50.00	40.58	81	45.03	90	66-138	10	0-20	
Naphthalene	ND	50.00	45.56	91	49.30	99	59-143	8	0-20	
n-Propylbenzene	ND	50.00	55.16	110	54.41	109	75-133	1	0-20	
Styrene	ND	50.00	53.43	107	54.03	108	70-142	1	0-28	
1,1,1,2-Tetrachloroethane	ND	50.00	49.09	98	50.50	101	75-139	3	0-20	
1,1,2,2-Tetrachloroethane	ND	50.00	53.23	106	57.76	116	61-145	8	0-20	
Tetrachloroethene	ND	50.00	35.85	72	37.54	75	47-143	5	0-20	
Toluene	ND	50.00	50.19	100	51.85	104	75-125	3	0-20	
1,2,3-Trichlorobenzene	ND	50.00	51.94	104	52.99	106	73-133	2	0-20	
1,2,4-Trichlorobenzene	ND	50.00	55.44	111	54.23	108	71-137	2	0-20	
1,1,1-Trichloroethane	ND	50.00	50.09	100	52.88	106	75-136	5	0-20	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50.00	57.30	115	57.19	114	42-168	0	0-22	
1,1,2-Trichloroethane	ND	50.00	47.25	94	48.52	97	75-125	3	0-20	
Trichloroethene	2.246	50.00	45.85	87	47.63	91	67-139	4	0-20	
Trichlorofluoromethane	ND	50.00	50.41	101	57.10	114	59-155	12	0-20	
1,2,3-Trichloropropane	ND	50.00	43.40	87	45.95	92	75-127	6	0-20	
1,2,4-Trimethylbenzene	ND	50.00	52.84	106	53.88	108	75-133	2	0-20	
1,3,5-Trimethylbenzene	ND	50.00	54.57	109	54.28	109	75-135	1	0-20	
Vinyl Acetate	ND	50.00	72.59	145	69.08	138	54-180	5	0-25	
Vinyl Chloride	ND	50.00	48.88	98	54.59	109	51-153	11	0-20	
p/m-Xylene	ND	100.0	107.6	108	108.2	108	75-133	1	0-20	
o-Xylene	ND	50.00	54.03	108	54.94	110	75-134	2	0-20	
Methyl-t-Butyl Ether (MTBE)	ND	50.00	45.62	91	47.87	96	64-136	5	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 3510C
 Method: EPA 8270C (M) Isotope Dilution

Project: Building 684 - Raytheon Task No. 764.10

Page 1 of 9

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-16-216-917	LCS	Aqueous	GC/MS DDD	12/21/16	12/21/16 15:21	161221L11
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
1,4-Dioxane		20.00	20.37	102	50-130	



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Quality Control - LCS

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 12/19/16
Work Order: 16-12-1873
Preparation: EPA 5030C
Method: EPA 8260B

Project: Building 684 - Raytheon Task No. 764.10

Page 2 of 9

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number	
099-14-001-22144	LCS	Aqueous	GC/MS PP	12/20/16	12/20/16 14:43	161220L032	
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>ME CL</u>	<u>Qualifiers</u>
Acetone		50.00	38.48	77	53-137	39-151	
Benzene		50.00	53.05	106	79-121	72-128	
Bromobenzene		50.00	51.69	103	80-120	73-127	
Bromochloromethane		50.00	50.62	101	80-122	73-129	
Bromodichloromethane		50.00	50.35	101	80-124	73-131	
Bromoform		50.00	50.01	100	73-127	64-136	
Bromomethane		50.00	39.15	78	50-150	33-167	
2-Butanone		50.00	41.04	82	60-126	49-137	
n-Butylbenzene		50.00	62.74	125	72-138	61-149	
sec-Butylbenzene		50.00	60.35	121	77-131	68-140	
tert-Butylbenzene		50.00	59.23	118	80-125	72-132	
Carbon Disulfide		50.00	53.21	106	50-150	33-167	
Carbon Tetrachloride		50.00	55.45	111	65-143	52-156	
Chlorobenzene		50.00	51.94	104	80-120	73-127	
Chloroethane		50.00	55.66	111	62-128	51-139	
Chloroform		50.00	50.48	101	80-120	73-127	
Chloromethane		50.00	54.04	108	43-133	28-148	
2-Chlorotoluene		50.00	53.86	108	80-121	73-128	
4-Chlorotoluene		50.00	55.21	110	80-120	73-127	
Dibromochloromethane		50.00	50.33	101	80-123	73-130	
1,2-Dibromo-3-Chloropropane		50.00	42.15	84	66-126	56-136	
1,2-Dibromoethane		50.00	49.72	99	80-120	73-127	
Dibromomethane		50.00	48.97	98	80-120	73-127	
1,2-Dichlorobenzene		50.00	52.72	105	80-120	73-127	
1,3-Dichlorobenzene		50.00	53.90	108	80-120	73-127	
1,4-Dichlorobenzene		50.00	52.09	104	80-120	73-127	
Dichlorodifluoromethane		50.00	64.69	129	50-150	33-167	
1,1-Dichloroethane		50.00	51.58	103	72-126	63-135	
1,2-Dichloroethane		50.00	49.45	99	76-120	69-127	
1,1-Dichloroethene		50.00	54.27	109	66-132	55-143	
c-1,2-Dichloroethene		50.00	52.55	105	78-120	71-127	
t-1,2-Dichloroethene		50.00	53.63	107	66-132	55-143	
1,2-Dichloropropane		50.00	51.57	103	80-120	73-127	
1,3-Dichloropropane		50.00	49.81	100	80-120	73-127	
2,2-Dichloropropane		50.00	68.06	136	50-150	33-167	
1,1-Dichloropropene		50.00	57.04	114	75-123	67-131	
c-1,3-Dichloropropene		50.00	48.46	97	77-131	68-140	
t-1,3-Dichloropropene		50.00	47.60	95	76-136	66-146	

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B

Project: Building 684 - Raytheon Task No. 764.10

Page 3 of 9

<u>Parameter</u>	<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>ME CL</u>	<u>Qualifiers</u>
Ethylbenzene	50.00	55.26	111	80-120	73-127	
2-Hexanone	50.00	41.69	83	63-123	53-133	
Isopropylbenzene	50.00	57.85	116	80-128	72-136	
p-Isopropyltoluene	50.00	60.04	120	73-133	63-143	
Methylene Chloride	50.00	49.37	99	61-133	49-145	
4-Methyl-2-Pentanone	50.00	42.75	85	65-125	55-135	
Naphthalene	50.00	48.21	96	69-129	59-139	
n-Propylbenzene	50.00	57.28	115	80-128	72-136	
Styrene	50.00	55.37	111	80-126	72-134	
1,1,1,2-Tetrachloroethane	50.00	51.24	102	80-129	72-137	
1,1,2,2-Tetrachloroethane	50.00	48.44	97	74-122	66-130	
Tetrachloroethene	50.00	53.71	107	55-139	41-153	
Toluene	50.00	52.86	106	80-120	73-127	
1,2,3-Trichlorobenzene	50.00	55.76	112	72-132	62-142	
1,2,4-Trichlorobenzene	50.00	58.72	117	74-134	64-144	
1,1,1-Trichloroethane	50.00	54.41	109	76-124	68-132	
1,1,2-Trichloro-1,2,2-Trifluoroethane	50.00	62.53	125	54-150	38-166	
1,1,2-Trichloroethane	50.00	48.79	98	80-120	73-127	
Trichloroethene	50.00	51.91	104	79-121	72-128	
Trichlorofluoromethane	50.00	59.18	118	72-132	62-142	
1,2,3-Trichloropropane	50.00	46.21	92	75-123	67-131	
1,2,4-Trimethylbenzene	50.00	56.55	113	74-128	65-137	
1,3,5-Trimethylbenzene	50.00	56.71	113	77-131	68-140	
Vinyl Acetate	50.00	45.92	92	50-150	33-167	
Vinyl Chloride	50.00	56.35	113	63-129	52-140	
p/m-Xylene	100.0	112.3	112	80-122	73-129	
o-Xylene	50.00	56.59	113	80-128	72-136	
Methyl-t-Butyl Ether (MTBE)	50.00	49.24	98	69-123	60-132	

Total number of LCS compounds: 66

Total number of ME compounds: 0

Total number of ME compounds allowed: 3

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B

Project: Building 684 - Raytheon Task No. 764.10

Page 4 of 9

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number	
099-14-001-22156	LCS	Aqueous	GC/MS PP	12/20/16	12/21/16 03:16	161220L064	
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>ME CL</u>	<u>Qualifiers</u>
Acetone		50.00	47.04	94	53-137	39-151	
Benzene		50.00	51.13	102	79-121	72-128	
Bromobenzene		50.00	50.43	101	80-120	73-127	
Bromochloromethane		50.00	50.86	102	80-122	73-129	
Bromodichloromethane		50.00	51.74	103	80-124	73-131	
Bromoform		50.00	50.36	101	73-127	64-136	
Bromomethane		50.00	38.00	76	50-150	33-167	
2-Butanone		50.00	45.13	90	60-126	49-137	
n-Butylbenzene		50.00	55.25	110	72-138	61-149	
sec-Butylbenzene		50.00	56.05	112	77-131	68-140	
tert-Butylbenzene		50.00	57.03	114	80-125	72-132	
Carbon Disulfide		50.00	46.30	93	50-150	33-167	
Carbon Tetrachloride		50.00	50.60	101	65-143	52-156	
Chlorobenzene		50.00	49.35	99	80-120	73-127	
Chloroethane		50.00	56.93	114	62-128	51-139	
Chloroform		50.00	50.20	100	80-120	73-127	
Chloromethane		50.00	52.02	104	43-133	28-148	
2-Chlorotoluene		50.00	52.07	104	80-121	73-128	
4-Chlorotoluene		50.00	53.20	106	80-120	73-127	
Dibromochloromethane		50.00	50.38	101	80-123	73-130	
1,2-Dibromo-3-Chloropropane		50.00	48.18	96	66-126	56-136	
1,2-Dibromoethane		50.00	49.89	100	80-120	73-127	
Dibromomethane		50.00	49.13	98	80-120	73-127	
1,2-Dichlorobenzene		50.00	51.96	104	80-120	73-127	
1,3-Dichlorobenzene		50.00	51.22	102	80-120	73-127	
1,4-Dichlorobenzene		50.00	49.67	99	80-120	73-127	
Dichlorodifluoromethane		50.00	46.04	92	50-150	33-167	
1,1-Dichloroethane		50.00	51.52	103	72-126	63-135	
1,2-Dichloroethane		50.00	49.86	100	76-120	69-127	
1,1-Dichloroethene		50.00	51.06	102	66-132	55-143	
c-1,2-Dichloroethene		50.00	51.61	103	78-120	71-127	
t-1,2-Dichloroethene		50.00	50.69	101	66-132	55-143	
1,2-Dichloropropane		50.00	52.02	104	80-120	73-127	
1,3-Dichloropropane		50.00	49.49	99	80-120	73-127	
2,2-Dichloropropane		50.00	43.96	88	50-150	33-167	
1,1-Dichloropropene		50.00	52.15	104	75-123	67-131	
c-1,3-Dichloropropene		50.00	45.27	91	77-131	68-140	
t-1,3-Dichloropropene		50.00	44.41	89	76-136	66-146	

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B

Project: Building 684 - Raytheon Task No. 764.10

Page 5 of 9

<u>Parameter</u>	<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>ME CL</u>	<u>Qualifiers</u>
Ethylbenzene	50.00	52.58	105	80-120	73-127	
2-Hexanone	50.00	45.89	92	63-123	53-133	
Isopropylbenzene	50.00	54.87	110	80-128	72-136	
p-Isopropyltoluene	50.00	54.85	110	73-133	63-143	
Methylene Chloride	50.00	48.13	96	61-133	49-145	
4-Methyl-2-Pentanone	50.00	47.07	94	65-125	55-135	
Naphthalene	50.00	50.98	102	69-129	59-139	
n-Propylbenzene	50.00	53.38	107	80-128	72-136	
Styrene	50.00	53.99	108	80-126	72-134	
1,1,1,2-Tetrachloroethane	50.00	52.43	105	80-129	72-137	
1,1,2,2-Tetrachloroethane	50.00	53.33	107	74-122	66-130	
Tetrachloroethene	50.00	47.31	95	55-139	41-153	
Toluene	50.00	51.29	103	80-120	73-127	
1,2,3-Trichlorobenzene	50.00	52.80	106	72-132	62-142	
1,2,4-Trichlorobenzene	50.00	54.05	108	74-134	64-144	
1,1,1-Trichloroethane	50.00	51.46	103	76-124	68-132	
1,1,2-Trichloro-1,2,2-Trifluoroethane	50.00	47.21	94	54-150	38-166	
1,1,2-Trichloroethane	50.00	49.20	98	80-120	73-127	
Trichloroethene	50.00	48.68	97	79-121	72-128	
Trichlorofluoromethane	50.00	51.15	102	72-132	62-142	
1,2,3-Trichloropropane	50.00	47.37	95	75-123	67-131	
1,2,4-Trimethylbenzene	50.00	53.41	107	74-128	65-137	
1,3,5-Trimethylbenzene	50.00	53.35	107	77-131	68-140	
Vinyl Acetate	50.00	55.68	111	50-150	33-167	
Vinyl Chloride	50.00	54.83	110	63-129	52-140	
p/m-Xylene	100.0	106.2	106	80-122	73-129	
o-Xylene	50.00	54.97	110	80-128	72-136	
Methyl-t-Butyl Ether (MTBE)	50.00	50.82	102	69-123	60-132	

Total number of LCS compounds: 66

Total number of ME compounds: 0

Total number of ME compounds allowed: 3

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 12/19/16
Work Order: 16-12-1873
Preparation: EPA 5030C
Method: EPA 8260B

Project: Building 684 - Raytheon Task No. 764.10

Page 6 of 9

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number	
099-14-001-22158	LCS	Aqueous	GC/MS PP	12/21/16	12/21/16 16:17	161221L044	
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>ME CL</u>	<u>Qualifiers</u>
Acetone		50.00	42.68	85	53-137	39-151	
Benzene		50.00	50.88	102	79-121	72-128	
Bromobenzene		50.00	49.95	100	80-120	73-127	
Bromochloromethane		50.00	49.72	99	80-122	73-129	
Bromodichloromethane		50.00	51.18	102	80-124	73-131	
Bromoform		50.00	49.14	98	73-127	64-136	
Bromomethane		50.00	40.93	82	50-150	33-167	
2-Butanone		50.00	42.72	85	60-126	49-137	
n-Butylbenzene		50.00	59.95	120	72-138	61-149	
sec-Butylbenzene		50.00	58.22	116	77-131	68-140	
tert-Butylbenzene		50.00	57.25	114	80-125	72-132	
Carbon Disulfide		50.00	46.65	93	50-150	33-167	
Carbon Tetrachloride		50.00	50.23	100	65-143	52-156	
Chlorobenzene		50.00	49.54	99	80-120	73-127	
Chloroethane		50.00	54.42	109	62-128	51-139	
Chloroform		50.00	49.60	99	80-120	73-127	
Chloromethane		50.00	52.47	105	43-133	28-148	
2-Chlorotoluene		50.00	53.12	106	80-121	73-128	
4-Chlorotoluene		50.00	54.75	109	80-120	73-127	
Dibromochloromethane		50.00	49.05	98	80-123	73-130	
1,2-Dibromo-3-Chloropropane		50.00	45.20	90	66-126	56-136	
1,2-Dibromoethane		50.00	49.38	99	80-120	73-127	
Dibromomethane		50.00	48.60	97	80-120	73-127	
1,2-Dichlorobenzene		50.00	52.34	105	80-120	73-127	
1,3-Dichlorobenzene		50.00	52.57	105	80-120	73-127	
1,4-Dichlorobenzene		50.00	50.95	102	80-120	73-127	
Dichlorodifluoromethane		50.00	54.07	108	50-150	33-167	
1,1-Dichloroethane		50.00	50.05	100	72-126	63-135	
1,2-Dichloroethane		50.00	49.64	99	76-120	69-127	
1,1-Dichloroethene		50.00	51.11	102	66-132	55-143	
c-1,2-Dichloroethene		50.00	50.95	102	78-120	71-127	
t-1,2-Dichloroethene		50.00	50.15	100	66-132	55-143	
1,2-Dichloropropane		50.00	51.73	103	80-120	73-127	
1,3-Dichloropropane		50.00	48.82	98	80-120	73-127	
2,2-Dichloropropane		50.00	53.52	107	50-150	33-167	
1,1-Dichloropropene		50.00	51.89	104	75-123	67-131	
c-1,3-Dichloropropene		50.00	46.18	92	77-131	68-140	
t-1,3-Dichloropropene		50.00	45.10	90	76-136	66-146	

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B

Project: Building 684 - Raytheon Task No. 764.10

Page 7 of 9

<u>Parameter</u>	<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>ME CL</u>	<u>Qualifiers</u>
Ethylbenzene	50.00	53.05	106	80-120	73-127	
2-Hexanone	50.00	43.27	87	63-123	53-133	
Isopropylbenzene	50.00	55.31	111	80-128	72-136	
p-Isopropyltoluene	50.00	58.15	116	73-133	63-143	
Methylene Chloride	50.00	47.34	95	61-133	49-145	
4-Methyl-2-Pentanone	50.00	44.57	89	65-125	55-135	
Naphthalene	50.00	50.00	100	69-129	59-139	
n-Propylbenzene	50.00	54.86	110	80-128	72-136	
Styrene	50.00	54.01	108	80-126	72-134	
1,1,1,2-Tetrachloroethane	50.00	51.47	103	80-129	72-137	
1,1,2,2-Tetrachloroethane	50.00	47.70	95	74-122	66-130	
Tetrachloroethene	50.00	51.59	103	55-139	41-153	
Toluene	50.00	51.46	103	80-120	73-127	
1,2,3-Trichlorobenzene	50.00	54.73	109	72-132	62-142	
1,2,4-Trichlorobenzene	50.00	56.60	113	74-134	64-144	
1,1,1-Trichloroethane	50.00	50.84	102	76-124	68-132	
1,1,2-Trichloro-1,2,2-Trifluoroethane	50.00	55.98	112	54-150	38-166	
1,1,2-Trichloroethane	50.00	48.80	98	80-120	73-127	
Trichloroethene	50.00	51.08	102	79-121	72-128	
Trichlorofluoromethane	50.00	55.32	111	72-132	62-142	
1,2,3-Trichloropropane	50.00	46.61	93	75-123	67-131	
1,2,4-Trimethylbenzene	50.00	54.95	110	74-128	65-137	
1,3,5-Trimethylbenzene	50.00	54.63	109	77-131	68-140	
Vinyl Acetate	50.00	48.81	98	50-150	33-167	
Vinyl Chloride	50.00	55.10	110	63-129	52-140	
p/m-Xylene	100.0	107.7	108	80-122	73-129	
o-Xylene	50.00	54.80	110	80-128	72-136	
Methyl-t-Butyl Ether (MTBE)	50.00	48.56	97	69-123	60-132	

Total number of LCS compounds: 66

Total number of ME compounds: 0

Total number of ME compounds allowed: 3

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B

Project: Building 684 - Raytheon Task No. 764.10

Page 8 of 9

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number	
099-14-001-22169	LCS	Aqueous	GC/MS PP	12/21/16	12/22/16 04:16	161221L068	
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>ME CL</u>	<u>Qualifiers</u>
Acetone		50.00	45.56	91	53-137	39-151	
Benzene		50.00	53.18	106	79-121	72-128	
Bromobenzene		50.00	51.15	102	80-120	73-127	
Bromochloromethane		50.00	50.78	102	80-122	73-129	
Bromodichloromethane		50.00	52.36	105	80-124	73-131	
Bromoform		50.00	50.40	101	73-127	64-136	
Bromomethane		50.00	42.99	86	50-150	33-167	
2-Butanone		50.00	43.53	87	60-126	49-137	
n-Butylbenzene		50.00	56.23	112	72-138	61-149	
sec-Butylbenzene		50.00	56.83	114	77-131	68-140	
tert-Butylbenzene		50.00	56.97	114	80-125	72-132	
Carbon Disulfide		50.00	51.02	102	50-150	33-167	
Carbon Tetrachloride		50.00	52.76	106	65-143	52-156	
Chlorobenzene		50.00	51.14	102	80-120	73-127	
Chloroethane		50.00	54.70	109	62-128	51-139	
Chloroform		50.00	51.60	103	80-120	73-127	
Chloromethane		50.00	53.71	107	43-133	28-148	
2-Chlorotoluene		50.00	53.60	107	80-121	73-128	
4-Chlorotoluene		50.00	53.73	107	80-120	73-127	
Dibromochloromethane		50.00	50.60	101	80-123	73-130	
1,2-Dibromo-3-Chloropropane		50.00	44.01	88	66-126	56-136	
1,2-Dibromoethane		50.00	50.85	102	80-120	73-127	
Dibromomethane		50.00	51.00	102	80-120	73-127	
1,2-Dichlorobenzene		50.00	52.28	105	80-120	73-127	
1,3-Dichlorobenzene		50.00	51.83	104	80-120	73-127	
1,4-Dichlorobenzene		50.00	50.03	100	80-120	73-127	
Dichlorodifluoromethane		50.00	46.12	92	50-150	33-167	
1,1-Dichloroethane		50.00	51.97	104	72-126	63-135	
1,2-Dichloroethane		50.00	51.30	103	76-120	69-127	
1,1-Dichloroethene		50.00	54.12	108	66-132	55-143	
c-1,2-Dichloroethene		50.00	53.23	106	78-120	71-127	
t-1,2-Dichloroethene		50.00	51.95	104	66-132	55-143	
1,2-Dichloropropane		50.00	51.96	104	80-120	73-127	
1,3-Dichloropropane		50.00	50.61	101	80-120	73-127	
2,2-Dichloropropane		50.00	44.89	90	50-150	33-167	
1,1-Dichloropropene		50.00	53.91	108	75-123	67-131	
c-1,3-Dichloropropene		50.00	46.11	92	77-131	68-140	
t-1,3-Dichloropropene		50.00	44.45	89	76-136	66-146	

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/19/16
 Work Order: 16-12-1873
 Preparation: EPA 5030C
 Method: EPA 8260B

Project: Building 684 - Raytheon Task No. 764.10

Page 9 of 9

<u>Parameter</u>	<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>ME CL</u>	<u>Qualifiers</u>
Ethylbenzene	50.00	54.98	110	80-120	73-127	
2-Hexanone	50.00	43.47	87	63-123	53-133	
Isopropylbenzene	50.00	56.33	113	80-128	72-136	
p-Isopropyltoluene	50.00	55.30	111	73-133	63-143	
Methylene Chloride	50.00	50.35	101	61-133	49-145	
4-Methyl-2-Pentanone	50.00	44.35	89	65-125	55-135	
Naphthalene	50.00	49.29	99	69-129	59-139	
n-Propylbenzene	50.00	54.80	110	80-128	72-136	
Styrene	50.00	55.18	110	80-126	72-134	
1,1,1,2-Tetrachloroethane	50.00	52.22	104	80-129	72-137	
1,1,2,2-Tetrachloroethane	50.00	48.45	97	74-122	66-130	
Tetrachloroethene	50.00	52.71	105	55-139	41-153	
Toluene	50.00	53.21	106	80-120	73-127	
1,2,3-Trichlorobenzene	50.00	53.52	107	72-132	62-142	
1,2,4-Trichlorobenzene	50.00	53.55	107	74-134	64-144	
1,1,1-Trichloroethane	50.00	53.73	107	76-124	68-132	
1,1,2-Trichloro-1,2,2-Trifluoroethane	50.00	48.90	98	54-150	38-166	
1,1,2-Trichloroethane	50.00	50.67	101	80-120	73-127	
Trichloroethene	50.00	51.64	103	79-121	72-128	
Trichlorofluoromethane	50.00	52.19	104	72-132	62-142	
1,2,3-Trichloropropane	50.00	46.10	92	75-123	67-131	
1,2,4-Trimethylbenzene	50.00	54.58	109	74-128	65-137	
1,3,5-Trimethylbenzene	50.00	55.10	110	77-131	68-140	
Vinyl Acetate	50.00	45.01	90	50-150	33-167	
Vinyl Chloride	50.00	56.08	112	63-129	52-140	
p/m-Xylene	100.0	110.7	111	80-122	73-129	
o-Xylene	50.00	56.54	113	80-128	72-136	
Methyl-t-Butyl Ether (MTBE)	50.00	49.20	98	69-123	60-132	

Total number of LCS compounds: 66

Total number of ME compounds: 0

Total number of ME compounds allowed: 3

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Sample Analysis Summary Report

Work Order: 16-12-1873

Page 1 of 1

<u>Method</u>	<u>Extraction</u>	<u>Chemist ID</u>	<u>Instrument</u>	<u>Analytical Location</u>
EPA 8260B	EPA 5030C	823	GC/MS PP	2
EPA 8270C (M) Isotope Dilution	EPA 3510C	928	GC/MS DDD	1

Glossary of Terms and Qualifiers

Work Order: 16-12-1873

Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

PROJECT: Building 684 - Raytheon
TASK NO.: 764.10

Project Manager Ken Puentes
QA Manager _____
Phone 858-455-6500

Project BCI Fullerton 764.10	Sampled By: TJE/AMD	SAMPLE COLLECTION		Groundwater Lab prepared water Hydrochloric Acid (HCl)	Ice	40-ml VOA	1 L Amber	VOCs by EPA 8260B	1,4-Dioxane by 8270 SIM	ESTIMATED CONCENTRATION				Standard TAT	MS/MSD Requested	REMARKS
		Date	Time							0-10	10-100	100-1,000	>1,000			
1	TB-121916	12/19/16	7:00	X	X	2		X	X	X	X	X				
2	LAX-01		10:00	X	X	3		X	X	X	X	X				
3	UA-05D LAX-01		11:00	X	X	3	1	X	X	X	X	X			X	REPORT "J" FLAGS
4	UA-05D		11:15	X	X	3		X	X	X	X	X				
5	UA-03		12:30	X	X	3	1	X	X	X	X	X			X	LOG CODE: HARG Geotracker ID: T0605900143
6	S-24		12:40	X	X	3		X	X	X	X	X				
7	UA-15D		13:00	X	X	3		X	X	X	X	X				
8	RB-121916C		13:05	X	X	3		X	X	X	X	X				
9	AB-02		13:15	X	X	3		X	X	X	X	X				
10	AB-0200		13:25	X	X	3		X	X	X	X	X				
11	LAX-02		14:00	X	X	3		X	X	X	X	X				
12	AB-01		14:20	X	X	3	1	X	X	X	X	X				
13	S-26		14:30	X	X	5		X	X	X	X	X			X	
14	UA-06D		14:45	X	X	3		X	X	X	X	X				
15	UA-06		14:55	X	X	3		X	X	X	X	X				

Laboratory
~~ATE~~
~~Att. Rachelle Arada~~
ECI
Vivendra Patel

Total number of containers per analysis: _____ Total No. of Containers: _____

Relinquished By: / Company:	Date / Time	Received By: / Company	Date / Time
TJS / H+A	12/19/16 1615	RMV ECI	12/19/16 1615
Relinquished By: / Company:	Date / Time	Received By: / Company	Date / Time
AMD / ECI	12/19/16 1710	Shane ECI	12/19/16 1710

- No. of containers correct
- Received in good condition
- Custody seals secure
- Conforms to COC document

Send Results to:
Ken Puentes
9171 Towne Centre Drive
Suite 375
San Diego, CA 92122
Ph: 858-455-6500
kpuentes@hargis.com

_____ Temperature on receipt

1873

Date: 12/19/16
Page 2 of 4

PROJECT: Building 684 - Raytheon

TASK NO.: 764.10

Project Manager Ken Puentes
QA Manager _____
Phone 858-455-6500

Project BCI Fullerton 764.10	Sampled By: TJ/AM	SAMPLE COLLECTION		Groundwater	Lab prepared water	Hydrochloric Acid (HCl)	Ice	40-ml VOA	1 L Amber	VOCs by EPA 8260B	1,4-Dioxane by 8270 SIM	ESTIMATED CONCENTRATION				Standard TAT	MS/MSD Requested	REMARKS
		Date	Time									0-10	10-100	100-1,000	>1,000			
16	0A-0680	12/19/16	1500	X	X	X	X	X	X	X	X	X	X	X	X	X		
17	RB-121916D	↓	1615	X	X	X	X	X	X	X	X	X	X	X	X	X		REPORT "J" FLAGS
18	0A-07D	↓	1530	X	X	X	X	X	X	X	X	X	X	X	X	X		LOG CODE: HARG
19	0A-07	↓	1540	X	X	X	X	X	X	X	X	X	X	X	X	X		Geotracker ID: T0605900143

Total number of containers per analysis: _____ Total No. of Containers: _____

Relinquished By: / Company:	Date / Time	Received By: / Company	Date / Time
TJ & H+A	12/19/16 1615	AMN ECI	12/19/16 1615
Relinquished By: / Company:	Date / Time	Received By: / Company	Date / Time
AMN ECI	12/19/16		

- No. of containers correct
- Received in good condition
- Custody seals secure
- Conforms to COC document

Send Results to:
Ken Puentes
9171 Towne Centre Drive
Suite 375
San Diego, CA 92122
Ph: 858-455-6500
kpuentes@hargis.com

_____ Temperature on receipt

1873

Date: 12/19/16
Page 3 of 4

PROJECT: Building 684 - Raytheon

TASK NO.: 764.10

Project Manager Ken Puentes
QA Manager _____
Phone 858-455-6500

Project BCI Fullerton 764.10	Sampled By: ASF/TSA	SAMPLE COLLECTION		Groundwater	Lab prepared water	Hydrochloric Acid (HCl)	Ice	40-ml VOA	1 L Amber	VOCs by EPA 8260B	1,4-Dioxane by 8270 SIM	ESTIMATED CONCENTRATION					Standard TAT	MS/MSD Requested	REMARKS
		Date	Time									0-10	10-100	100-1,000	>1,000				
20	S-27	12/19/16	0920	X	X	X	X	3		X	X					X			
21	S-15		0915	X	X	X	X	3		X	X					X			
22	S-14		0940	X	X	X	X	3		X	X					X		REPORT "J" FLAGS	
23	LAX-13		1030	X	X	X	X	3		X	X					X			
24	AB-03		1040	X	X	X	X	3	1	X	X					X		LOG CODE: HARG	
25	MAX-02		1100	X	X	X	X	3		X	X					X		Geotracker ID: T0605900143	
26	UA-02		1230	X	X	X	X	3		X	X					X			
27	RB-1219110A		1240	X	X	X	X	3		X	X					X			
28	UA-0200		1245	X	X	X	X	3		X	X					X			
29	S-07		1250	X	X	X	X	3		X	X					X			
30	HEW-03		1320	X	X	X	X	3		X	X					X			
31	S-02		1345	X	X	X	X	3	1	X	X					X			
32	S-03		1400	X	X	X	X	3		X	X					X			
33	S-32		1420	X	X	X	X	3		X	X					X			
34	UA-04D		1445	X	X	X	X	3		X	X					X			

Total number of containers per analysis: _____ Total No. of Containers: _____

Relinquished By: / Company:	Date / Time	Received By: / Company	Date / Time
TJ G / U-A	12/19/16 1615	[Signature] ECI	12/19/16 1615
Relinquished By: / Company:	Date / Time	Received By: / Company	Date / Time
[Signature] ECI	12/19/16 1710	[Signature] ECI	12/19/16 1710

- No. of containers correct
- Received in good condition
- Custody seals secure
- Conforms to COC document

Temperature on receipt _____

Send Results to:
Ken Puentes
9171 Towne Centre Drive
Suite 375
San Diego, CA 92122
Ph: 858-455-6500
kpuentes@hargis.com

1873

PROJECT: Building 684 - Raytheon

TASK NO.: 764.10

Project Manager Ken Puentes
QA Manager _____
Phone 858-455-6500

Project BCI Fullerton 764.10	Sampled By: ASF/ISA	SAMPLE COLLECTION		Groundwater	Lab prepared water	Hydrochloric Acid (HCl)	Ice	40-ml VOA	1 L Amber	REQUESTED	ESTIMATED CONCENTRATION					SPECIAL HANDLING	MS/MSD Requested	REMARKS
		Date	Time								VOCs by EPA 8260B	1,4-Dioxane by 8270 SIM	0-10	10-100	100-1,000			
35	MAX-01	12/19/16	1500	X	X	X	X	X	X	X	X	X	X	X	X	X		
36	S-04	↓	1525	X	X	X	X	X	X	X	X	X	X	X	X	X		REPORT "J" FLAGS
37	S-0400	↓	1540 1640	X	X	X	X	X	X	X	X	X	X	X	X	X		LOG CODE: HARG Geotracker ID: T0605900143

Total number of containers per analysis: _____ Total No. of Containers: _____

Relinquished By: / Company:	Date / Time	Received By: / Company	Date / Time
TJ Co / HFA	12/19/16 1615	[Signature] ECI	12/19/16 1615
Relinquished By: / Company:	Date / Time	Received By: / Company	Date / Time
[Signature] ECI	12/19/16 1710	[Signature] ECI	12/19/16 1710

- No. of containers correct
- Received in good condition
- Custody seals secure
- Conforms to COC document

Send Results to:
Ken Puentes
9171 Towne Centre Drive
Suite 375
San Diego, CA 92122
Ph: 858-455-6500
kpuentes@hargis.com

_____ Temperature on receipt

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 2

CLIENT: MARGIS ASSOCIATES, INC

DATE: 12 / 19 / 2016

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)
 Thermometer ID: SC3A (CF: 0.0°C); Temperature (w/o CF): 2.7 °C (w/ CF): 2.7 °C; Blank Sample
 Sample(s) outside temperature criteria (PM/APM contacted by: _____)
 Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling
 Sample(s) received at ambient temperature; placed on ice for transport by courier
 Ambient Temperature: Air Filter Checked by: 676

CUSTODY SEAL:
 Cooler Present and Intact Present but Not Intact Not Present N/A Checked by: 676
 Sample(s) Present and Intact Present but Not Intact Not Present N/A Checked by: 1053

SAMPLE CONDITION:

	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Sampling date <input type="checkbox"/> Sampling time <input type="checkbox"/> Matrix <input type="checkbox"/> Number of containers			
<input type="checkbox"/> No analysis requested <input type="checkbox"/> Not relinquished <input type="checkbox"/> No relinquished date <input type="checkbox"/> No relinquished time			
Sampler's name indicated on COC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with COC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and in good condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers for analyses requested	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sufficient volume/mass for analyses requested	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples received within holding time	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aqueous samples for certain analyses received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfide <input type="checkbox"/> Dissolved Oxygen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation chemical(s) noted on COC and/or sample container	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unpreserved aqueous sample(s) received for certain analyses			
<input type="checkbox"/> Volatile Organics <input type="checkbox"/> Total Metals <input type="checkbox"/> Dissolved Metals			
Container(s) for certain analysis free of headspace	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Volatile Organics <input type="checkbox"/> Dissolved Gases (RSK-175) <input type="checkbox"/> Dissolved Oxygen (SM 4500)			
<input type="checkbox"/> Carbon Dioxide (SM 4500) <input type="checkbox"/> Ferrous Iron (SM 3500) <input type="checkbox"/> Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CONTAINER TYPE: (Trip Blank Lot Number: N/A)

Aqueous: VOA VOAh VOAna₂ 100PJ 100PJna₂ 125AGB 125AGBh 125AGBp 125PB
 125PBz_{na} 250AGB 250CGB 250CGBs 250PB 250PBn 500AGB 500AGJ 500AGJs
 500PB 1AGB 1AGBna₂ 1AGBs 1PB 1PBna _____ _____ _____ _____

Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve (_____) EnCores® (_____) TerraCores® (_____) _____

Air: Tedlar™ Canister Sorbent Tube PUF _____ **Other Matrix** (_____) _____ _____

Container: **A** = Amber, **B** = Bottle, **C** = Clear, **E** = Envelope, **G** = Glass, **J** = Jar, **P** = Plastic, and **Z** = Ziploc/Resealable Bag
 Preservative: **b** = buffered, **f** = filtered, **h** = HCl, **n** = HNO₃, **na** = NaOH, **na₂** = Na₂S₂O₃, **p** = H₃PO₄, **s** = H₂SO₄, **u** = ultra-pure, **x** = Na₂SO₃+NaHSO₄.H₂O, **z_{na}** = Zn (CH₃CO₂)₂ + NaOH Labeled/Checked by: 1053
Reviewed by: 774



SAMPLE RECEIPT CHECKLIST

COOLER 2 OF 2

CLIENT: HARGIS + ASSOCIATES / INC.

DATE: 12 / 19 / 2016

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC3A (CF: 0.0°C); Temperature (w/o CF): 2.4 °C (w/ CF): 2.4 °C; Blank Sample

Sample(s) outside temperature criteria (PM/APM contacted by: _____)

Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: Air Filter

Checked by: 676

CUSTODY SEAL:

Cooler Present and Intact Present but Not Intact Not Present N/A

Checked by: 676

Sample(s) Present and Intact Present but Not Intact Not Present N/A

Checked by: 1053

SAMPLE CONDITION:

Yes No N/A

Chain-of-Custody (COC) document(s) received with samples

COC document(s) received complete

Sampling date Sampling time Matrix Number of containers

No analysis requested Not relinquished No relinquished date No relinquished time

Sampler's name indicated on COC

Sample container label(s) consistent with COC

Sample container(s) intact and in good condition

Proper containers for analyses requested

Sufficient volume/mass for analyses requested

Samples received within holding time

Aqueous samples for certain analyses received within 15-minute holding time

pH Residual Chlorine Dissolved Sulfide Dissolved Oxygen

Proper preservation chemical(s) noted on COC and/or sample container

Unpreserved aqueous sample(s) received for certain analyses

Volatile Organics Total Metals Dissolved Metals

Container(s) for certain analysis free of headspace

Volatile Organics Dissolved Gases (RSK-175) Dissolved Oxygen (SM 4500)

Carbon Dioxide (SM 4500) Ferrous Iron (SM 3500) Hydrogen Sulfide (Hach)

Tedlar™ bag(s) free of condensation

CONTAINER TYPE: (Trip Blank Lot Number: _____)

Aqueous: VOA VOAh VOAna₂ 100PJ 100PJna₂ 125AGB 125AGBh 125AGBp 125PB

125PBz_{na} 250AGB 250CGB 250CGBs 250PB 250PBn 500AGB 500AGJ 500AGJs

500PB 1AGB 1AGBna₂ 1AGBs 1PB 1PBna _____ _____ _____

Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve (_____) EnCores® (_____) TerraCores® (_____) _____

Air: Tedlar™ Canister Sorbent Tube PUF _____ Other Matrix (_____) _____ _____

Container: A = Amber, B = Bottle, C = Clear, E = Envelope, G = Glass, J = Jar, P = Plastic, and Z = Ziploc/Resealable Bag

Preservative: b = buffered, f = filtered, h = HCl, n = HNO₃, na = NaOH, na₂ = Na₂S₂O₃, p = H₃PO₄, Labeled/Checked by: 1053

s = H₂SO₄, u = ultra-pure, x = Na₂SO₃+NaHSO₄.H₂O, z_{na} = Zn (CH₃CO₂)₂ + NaOH Reviewed by: 777

Return to Contents

SAMPLE ANOMALY REPORT

DATE: 12 / 19 / 2016

SAMPLES, CONTAINERS, AND LABELS:

- Sample(s) NOT RECEIVED but listed on COC
Sample(s) received but NOT LISTED on COC
Holding time expired (list client or ECI sample ID and analysis)
Insufficient sample amount for requested analysis (list analysis)
Improper container(s) used (list analysis)
Improper preservative used (list analysis)
No preservative noted on COC or label (list analysis and notify lab)
Sample container(s) not labeled
Client sample label(s) illegible (list container type and analysis)
Client sample label(s) do not match COC (comment)
Project information
Client sample ID
Sampling date and/or time
Number of container(s)
Requested analysis
Sample container(s) compromised (comment)
Broken
Water present in sample container
Air sample container(s) compromised (comment)
Flat
Very low in volume
Leaking (not transferred; duplicate bag submitted)
Leaking (transferred into ECI Tedlar™ bags*)
Leaking (transferred into client's Tedlar™ bags*)

Comments

Multiple horizontal lines for handwritten comments.

MISCELLANEOUS: (Describe)

Comments

HEADSPACE:

(Containers with bubble > 6 mm or ¼ inch for volatile organic or dissolved gas analysis)

(Containers with bubble for other analysis)

Table with 6 columns: ECI Sample ID, ECI Container ID, Total Number, ECI Sample ID, ECI Container ID, Total Number. Handwritten data: 33, C, 3.

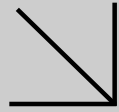
Table with 4 columns: ECI Sample ID, ECI Container ID, Total Number, Requested Analysis.

Comments: _____

Reported by: 1053

Reviewed by: 778

** Record the total number of containers (i.e., vials or bottles) for the affected sample.



WORK ORDER NUMBER: 16-12-2002

The difference is service



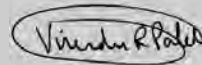
AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: Hargis + Associates, Inc.

Client Project Name: Building 684 - Raytheon Task No. 764.10

Attention: Ken Puentes
9171 Towne Centre Drive
Suite 375
San Diego, CA 92122-6215



Approved for release on 01/04/2017 by:
Virendra Patel
Project Manager

ResultLink ▶

Email your PM ▶

Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

Contents

Client Project Name: Building 684 - Raytheon Task No. 764.10
 Work Order Number: 16-12-2002

1	Work Order Narrative.	3
2	Sample Summary.	4
3	Detections Summary.	5
4	Client Sample Data.	8
	4.1 1,4-Dioxane by EPA 8270C (M) Isotope Dilution (Aqueous).	8
	4.2 EPA 8260B Volatile Organics (Aqueous).	10
5	Quality Control Sample Data.	90
	5.1 MS/MSD.	90
	5.2 LCS/LCSD.	101
6	Sample Analysis Summary.	110
7	Glossary of Terms and Qualifiers.	111
8	Chain-of-Custody/Sample Receipt Form.	112

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 12/20/16. They were assigned to Work Order 16-12-2002.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

Sample Summary

Client: Hargis + Associates, Inc.	Work Order:	16-12-2002
9171 Towne Centre Drive, Suite 375	Project Name:	Building 684 - Raytheon Task No. 764.10
San Diego, CA 92122-6215	PO Number:	
	Date/Time Received:	12/20/16 17:40
	Number of Containers:	120

Attn: Ken Puentes

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
TB-122016	16-12-2002-1	12/20/16 07:00	2	Aqueous
HEW-04	16-12-2002-2	12/20/16 07:05	4	Aqueous
HEW-01	16-12-2002-3	12/20/16 07:20	4	Aqueous
HEW-0100	16-12-2002-4	12/20/16 07:25	4	Aqueous
S-18	16-12-2002-5	12/20/16 07:45	3	Aqueous
AB-06	16-12-2002-6	12/20/16 08:15	5	Aqueous
UA-10D	16-12-2002-7	12/20/16 08:30	3	Aqueous
UB-04	16-12-2002-8	12/20/16 08:40	3	Aqueous
RB-122016A	16-12-2002-9	12/20/16 08:50	3	Aqueous
AB-08	16-12-2002-10	12/20/16 09:15	3	Aqueous
UA-16D	16-12-2002-11	12/20/16 09:25	3	Aqueous
UA-17D	16-12-2002-12	12/20/16 09:35	3	Aqueous
UA-1700D	16-12-2002-13	12/20/16 09:40	3	Aqueous
UB-06	16-12-2002-14	12/20/16 09:45	3	Aqueous
RB-122016B	16-12-2002-15	12/20/16 09:55	3	Aqueous
UB-02	16-12-2002-16	12/20/16 10:15	3	Aqueous
AB-05	16-12-2002-17	12/20/16 10:30	5	Aqueous
UA-13D	16-12-2002-18	12/20/16 10:40	3	Aqueous
UA-1300D	16-12-2002-19	12/20/16 10:45	3	Aqueous
HEW-05	16-12-2002-20	12/20/16 11:30	6	Aqueous
S-29	16-12-2002-21	12/20/16 12:10	3	Aqueous
UA-12	16-12-2002-22	12/20/16 12:20	3	Aqueous
UA-12D	16-12-2002-23	12/20/16 12:25	3	Aqueous
UB-05	16-12-2002-24	12/20/16 12:45	3	Aqueous
AB-07	16-12-2002-25	12/20/16 12:55	3	Aqueous
UA-14D	16-12-2002-26	12/20/16 13:05	3	Aqueous
RB-122016C	16-12-2002-27	12/20/16 13:15	3	Aqueous
S-30	16-12-2002-28	12/20/16 13:30	3	Aqueous
UA-11D	16-12-2002-29	12/20/16 13:45	5	Aqueous
UA-11	16-12-2002-30	12/20/16 13:55	3	Aqueous
UB-03	16-12-2002-31	12/20/16 14:05	3	Aqueous
S-31	16-12-2002-32	12/20/16 14:20	3	Aqueous
UB-01	16-12-2002-33	12/20/16 14:35	3	Aqueous
SE-01	16-12-2002-34	12/20/16 14:50	3	Aqueous
S-08	16-12-2002-35	12/20/16 15:05	3	Aqueous
HEW-02	16-12-2002-36	12/20/16 16:20	4	Aqueous

Detections Summary

Client: Hargis + Associates, Inc.	Work Order: 16-12-2002	
9171 Towne Centre Drive, Suite 375	Project Name: Building 684 - Raytheon Task No. 764.10	
San Diego, CA 92122-6215	Received: 12/20/16	

Attn: Ken Puentes

Page 1 of 3

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
HEW-04 (16-12-2002-2)						
1,1-Dichloroethene	1.2	J	0.86*	ug/L	EPA 8260B	EPA 5030C
Tetrachloroethene	0.90	J	0.77*	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	210		2.0	ug/L	EPA 8260B	EPA 5030C
1,4-Dioxane	4.4		1.0	ug/L	EPA 8270C (M) Isotope Dilution	EPA 3510C
HEW-01 (16-12-2002-3)						
Tetrachloroethene	10	J	7.7*	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	2000		20	ug/L	EPA 8260B	EPA 5030C
1,4-Dioxane	3.8		1.0	ug/L	EPA 8270C (M) Isotope Dilution	EPA 3510C
HEW-0100 (16-12-2002-4)						
Tetrachloroethene	9.2	J	7.7*	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	2000		20	ug/L	EPA 8260B	EPA 5030C
1,4-Dioxane	3.8		1.0	ug/L	EPA 8270C (M) Isotope Dilution	EPA 3510C
S-18 (16-12-2002-5)						
Trichloroethene	1.2		1.0	ug/L	EPA 8260B	EPA 5030C
AB-06 (16-12-2002-6)						
Acetone	11	J	10*	ug/L	EPA 8260B	EPA 5030C
Benzene	0.19	J	0.14*	ug/L	EPA 8260B	EPA 5030C
Chloroethane	3.6	J	2.3*	ug/L	EPA 8260B	EPA 5030C
c-1,2-Dichloroethene	3.9		1.0	ug/L	EPA 8260B	EPA 5030C
t-1,2-Dichloroethene	0.59	J	0.37*	ug/L	EPA 8260B	EPA 5030C
UA-10D (16-12-2002-7)						
Tetrachloroethene	11		1.0	ug/L	EPA 8260B	EPA 5030C
UB-04 (16-12-2002-8)						
c-1,2-Dichloroethene	1.5		1.0	ug/L	EPA 8260B	EPA 5030C
t-1,2-Dichloroethene	4.5		1.0	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	15		1.0	ug/L	EPA 8260B	EPA 5030C
AB-08 (16-12-2002-10)						
c-1,2-Dichloroethene	3.9		1.0	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	0.47	J	0.37*	ug/L	EPA 8260B	EPA 5030C
Vinyl Chloride	0.48	J	0.30*	ug/L	EPA 8260B	EPA 5030C
UA-17D (16-12-2002-12)						
Methyl-t-Butyl Ether (MTBE)	1.6		1.0	ug/L	EPA 8260B	EPA 5030C
UA-1700D (16-12-2002-13)						
Methyl-t-Butyl Ether (MTBE)	1.7		1.0	ug/L	EPA 8260B	EPA 5030C

* MDL is shown

Detections Summary

Client: Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Work Order: 16-12-2002
 Project Name: Building 684 - Raytheon Task No. 764.10
 Received: 12/20/16

Attn: Ken Puentes

Page 2 of 3

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
UB-06 (16-12-2002-14)						
Trichloroethene	5.8		1.0	ug/L	EPA 8260B	EPA 5030C
Vinyl Chloride	0.34	J	0.30*	ug/L	EPA 8260B	EPA 5030C
AB-05 (16-12-2002-17)						
Benzene	0.17	J	0.14*	ug/L	EPA 8260B	EPA 5030C
UA-13D (16-12-2002-18)						
Trichloroethene	0.78	J	0.37*	ug/L	EPA 8260B	EPA 5030C
UA-1300D (16-12-2002-19)						
Trichloroethene	0.89	J	0.37*	ug/L	EPA 8260B	EPA 5030C
HEW-05 (16-12-2002-20)						
c-1,2-Dichloroethene	0.57	J	0.48*	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	200		1.0	ug/L	EPA 8260B	EPA 5030C
S-29 (16-12-2002-21)						
Trichloroethene	0.70	J	0.37*	ug/L	EPA 8260B	EPA 5030C
UA-12 (16-12-2002-22)						
Tetrachloroethene	0.56	J	0.39*	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	3.4		1.0	ug/L	EPA 8260B	EPA 5030C
UA-12D (16-12-2002-23)						
Tetrachloroethene	0.52	J	0.39*	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	0.40	J	0.37*	ug/L	EPA 8260B	EPA 5030C
UB-05 (16-12-2002-24)						
c-1,2-Dichloroethene	4.2		1.0	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	0.54	J	0.37*	ug/L	EPA 8260B	EPA 5030C
Vinyl Chloride	0.31	J	0.30*	ug/L	EPA 8260B	EPA 5030C
AB-07 (16-12-2002-25)						
c-1,2-Dichloroethene	3.3		1.0	ug/L	EPA 8260B	EPA 5030C
t-1,2-Dichloroethene	3.5		1.0	ug/L	EPA 8260B	EPA 5030C
Tetrachloroethene	10		1.0	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	7.2		1.0	ug/L	EPA 8260B	EPA 5030C
Vinyl Chloride	0.49	J	0.30*	ug/L	EPA 8260B	EPA 5030C
UA-14D (16-12-2002-26)						
Tetrachloroethene	32		1.0	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	0.50	J	0.37*	ug/L	EPA 8260B	EPA 5030C
S-30 (16-12-2002-28)						
1,1-Dichloroethene	0.95	J	0.43*	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	0.37	J	0.37*	ug/L	EPA 8260B	EPA 5030C
UA-11D (16-12-2002-29)						
Tetrachloroethene	1.3		1.0	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	6.6		1.0	ug/L	EPA 8260B	EPA 5030C

* MDL is shown

Detections Summary

Client: Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Work Order: 16-12-2002
 Project Name: Building 684 - Raytheon Task No. 764.10
 Received: 12/20/16

Attn: Ken Puentes

Page 3 of 3

Client SampleID

<u>Analyte</u>	<u>Result</u>	<u>Qualifiers</u>	<u>RL</u>	<u>Units</u>	<u>Method</u>	<u>Extraction</u>
UA-11 (16-12-2002-30)						
Tetrachloroethene	6.4		1.0	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	2.0		1.0	ug/L	EPA 8260B	EPA 5030C
UB-03 (16-12-2002-31)						
c-1,2-Dichloroethene	5.6		1.0	ug/L	EPA 8260B	EPA 5030C
t-1,2-Dichloroethene	11		1.0	ug/L	EPA 8260B	EPA 5030C
Tetrachloroethene	2.5		1.0	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	2.8		1.0	ug/L	EPA 8260B	EPA 5030C
S-31 (16-12-2002-32)						
Benzene	0.23	J	0.14*	ug/L	EPA 8260B	EPA 5030C
SE-01 (16-12-2002-34)						
Tetrachloroethene	130		50	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	6400		50	ug/L	EPA 8260B	EPA 5030C
S-08 (16-12-2002-35)						
Tetrachloroethene	610		50	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	20000		200	ug/L	EPA 8260B	EPA 5030C
HEW-02 (16-12-2002-36)						
Chlorobenzene	0.18	J	0.17*	ug/L	EPA 8260B	EPA 5030C
1,1-Dichloroethene	1.7		1.0	ug/L	EPA 8260B	EPA 5030C
Tetrachloroethene	0.68	J	0.39*	ug/L	EPA 8260B	EPA 5030C
Trichloroethene	170		1.0	ug/L	EPA 8260B	EPA 5030C
1,4-Dioxane	1.6		1.0	ug/L	EPA 8270C (M) Isotope Dilution	EPA 3510C

Subcontracted analyses, if any, are not included in this summary.

* MDL is shown

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 3510C
 Method: EPA 8270C (M) Isotope Dilution
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
HEW-04	16-12-2002-2-D	12/20/16 07:05	Aqueous	GC/MS DDD	12/21/16	12/21/16 22:37	161221L12

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,4-Dioxane	4.4	1.0	0.28	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
Nitrobenzene-d5	99	56-123			
1,4-Dioxane-d8(IDS-IS)	38	30-120			

HEW-01	16-12-2002-3-D	12/20/16 07:20	Aqueous	GC/MS DDD	12/21/16	12/21/16 22:53	161221L12
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,4-Dioxane	3.8	1.0	0.28	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
Nitrobenzene-d5	101	56-123			
1,4-Dioxane-d8(IDS-IS)	39	30-120			

HEW-0100	16-12-2002-4-D	12/20/16 07:25	Aqueous	GC/MS DDD	12/21/16	12/21/16 23:09	161221L12
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,4-Dioxane	3.8	1.0	0.28	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
Nitrobenzene-d5	94	56-123			
1,4-Dioxane-d8(IDS-IS)	39	30-120			

HEW-05	16-12-2002-20-F	12/20/16 11:30	Aqueous	GC/MS DDD	12/21/16	12/21/16 23:25	161221L12
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,4-Dioxane	ND	1.0	0.28	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
Nitrobenzene-d5	97	56-123			
1,4-Dioxane-d8(IDS-IS)	39	30-120			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 3510C
 Method: EPA 8270C (M) Isotope Dilution
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
HEW-02	16-12-2002-36-D	12/20/16 16:20	Aqueous	GC/MS DDD	12/21/16	12/21/16 23:41	161221L12

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,4-Dioxane	1.6	1.0	0.28	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
Nitrobenzene-d5	99	56-123			
1,4-Dioxane-d8(IDS-IS)	42	30-120			

Method Blank	099-16-216-918	N/A	Aqueous	GC/MS DDD	12/21/16	12/21/16 21:32	161221L12
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
1,4-Dioxane	ND	1.0	0.28	1.00	
Surrogate	Rec. (%)	Control Limits	Qualifiers		
Nitrobenzene-d5	104	56-123			
1,4-Dioxane-d8(IDS-IS)	39	30-120			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 1 of 80

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
TB-122016	16-12-2002-1-A	12/20/16 07:00	Aqueous	GC/MS XX	12/21/16	12/21/16 14:44	161221L004

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 2 of 80

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	ND	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	100	77-120	
Dibromofluoromethane	102	80-128	
1,2-Dichloroethane-d4	103	80-129	
Toluene-d8	100	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 3 of 80

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
HEW-04	16-12-2002-2-A	12/20/16 07:05	Aqueous	GC/MS XX	12/22/16	12/22/16 18:39	161222L005

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	40	20	2.00	
Benzene	ND	1.0	0.28	2.00	
Bromobenzene	ND	2.0	0.61	2.00	
Bromochloromethane	ND	2.0	0.95	2.00	
Bromodichloromethane	ND	2.0	0.41	2.00	
Bromoform	ND	2.0	1.0	2.00	
Bromomethane	ND	20	7.8	2.00	
2-Butanone	ND	20	8.8	2.00	
n-Butylbenzene	ND	2.0	0.46	2.00	
sec-Butylbenzene	ND	2.0	0.49	2.00	
tert-Butylbenzene	ND	2.0	0.55	2.00	
Carbon Disulfide	ND	20	8.2	2.00	
Carbon Tetrachloride	ND	1.0	0.45	2.00	
Chlorobenzene	ND	2.0	0.34	2.00	
Chloroethane	ND	10	4.6	2.00	
Chloroform	ND	2.0	0.92	2.00	
Chloromethane	ND	20	7.1	2.00	
2-Chlorotoluene	ND	2.0	0.48	2.00	
4-Chlorotoluene	ND	2.0	0.27	2.00	
Dibromochloromethane	ND	2.0	0.50	2.00	
1,2-Dibromo-3-Chloropropane	ND	10	2.5	2.00	
1,2-Dibromoethane	ND	2.0	0.72	2.00	
Dibromomethane	ND	2.0	0.92	2.00	
1,2-Dichlorobenzene	ND	2.0	0.91	2.00	
1,3-Dichlorobenzene	ND	2.0	0.80	2.00	
1,4-Dichlorobenzene	ND	2.0	0.86	2.00	
Dichlorodifluoromethane	ND	2.0	0.91	2.00	
1,1-Dichloroethane	ND	2.0	0.56	2.00	
1,2-Dichloroethane	ND	1.0	0.48	2.00	
1,1-Dichloroethene	1.2	2.0	0.86	2.00	J
c-1,2-Dichloroethene	ND	2.0	0.95	2.00	
t-1,2-Dichloroethene	ND	2.0	0.74	2.00	
1,2-Dichloropropane	ND	2.0	0.85	2.00	
1,3-Dichloropropane	ND	2.0	0.61	2.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 4 of 80

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	2.0	0.73	2.00	
1,1-Dichloropropene	ND	2.0	0.93	2.00	
c-1,3-Dichloropropene	ND	1.0	0.49	2.00	
t-1,3-Dichloropropene	ND	1.0	0.51	2.00	
Ethylbenzene	ND	2.0	0.28	2.00	
2-Hexanone	ND	20	8.3	2.00	
Isopropylbenzene	ND	2.0	1.2	2.00	
p-Isopropyltoluene	ND	2.0	0.32	2.00	
Methylene Chloride	ND	20	7.7	2.00	
4-Methyl-2-Pentanone	ND	20	8.8	2.00	
Naphthalene	ND	20	10	2.00	
n-Propylbenzene	ND	2.0	0.35	2.00	
Styrene	ND	2.0	0.34	2.00	
1,1,1,2-Tetrachloroethane	ND	2.0	0.81	2.00	
1,1,2,2-Tetrachloroethane	ND	2.0	0.82	2.00	
Tetrachloroethene	0.90	2.0	0.77	2.00	J
Toluene	ND	2.0	0.47	2.00	
1,2,3-Trichlorobenzene	ND	2.0	1.0	2.00	
1,2,4-Trichlorobenzene	ND	2.0	1.0	2.00	
1,1,1-Trichloroethane	ND	2.0	0.61	2.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	20	7.8	2.00	
1,1,2-Trichloroethane	ND	2.0	0.77	2.00	
Trichloroethene	210	2.0	0.74	2.00	
Trichlorofluoromethane	ND	20	6.6	2.00	
1,2,3-Trichloropropane	ND	10	1.3	2.00	
1,2,4-Trimethylbenzene	ND	2.0	0.72	2.00	
1,3,5-Trimethylbenzene	ND	2.0	0.57	2.00	
Vinyl Acetate	ND	20	11	2.00	
Vinyl Chloride	ND	1.0	0.60	2.00	
p/m-Xylene	ND	2.0	0.60	2.00	
o-Xylene	ND	2.0	0.46	2.00	
Methyl-t-Butyl Ether (MTBE)	ND	2.0	0.62	2.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	97	77-120	
Dibromofluoromethane	102	80-128	
1,2-Dichloroethane-d4	105	80-129	
Toluene-d8	98	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 5 of 80

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
HEW-01	16-12-2002-3-A	12/20/16 07:20	Aqueous	GC/MS XX	12/22/16	12/22/16 19:06	161222L005

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	400	200	20.0	
Benzene	ND	10	2.8	20.0	
Bromobenzene	ND	20	6.1	20.0	
Bromochloromethane	ND	20	9.5	20.0	
Bromodichloromethane	ND	20	4.1	20.0	
Bromoform	ND	20	10	20.0	
Bromomethane	ND	200	78	20.0	
2-Butanone	ND	200	88	20.0	
n-Butylbenzene	ND	20	4.6	20.0	
sec-Butylbenzene	ND	20	4.9	20.0	
tert-Butylbenzene	ND	20	5.5	20.0	
Carbon Disulfide	ND	200	82	20.0	
Carbon Tetrachloride	ND	10	4.5	20.0	
Chlorobenzene	ND	20	3.4	20.0	
Chloroethane	ND	100	46	20.0	
Chloroform	ND	20	9.2	20.0	
Chloromethane	ND	200	71	20.0	
2-Chlorotoluene	ND	20	4.8	20.0	
4-Chlorotoluene	ND	20	2.7	20.0	
Dibromochloromethane	ND	20	5.0	20.0	
1,2-Dibromo-3-Chloropropane	ND	100	25	20.0	
1,2-Dibromoethane	ND	20	7.2	20.0	
Dibromomethane	ND	20	9.2	20.0	
1,2-Dichlorobenzene	ND	20	9.1	20.0	
1,3-Dichlorobenzene	ND	20	8.0	20.0	
1,4-Dichlorobenzene	ND	20	8.6	20.0	
Dichlorodifluoromethane	ND	20	9.1	20.0	
1,1-Dichloroethane	ND	20	5.6	20.0	
1,2-Dichloroethane	ND	10	4.8	20.0	
1,1-Dichloroethene	ND	20	8.6	20.0	
c-1,2-Dichloroethene	ND	20	9.5	20.0	
t-1,2-Dichloroethene	ND	20	7.4	20.0	
1,2-Dichloropropane	ND	20	8.5	20.0	
1,3-Dichloropropane	ND	20	6.1	20.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 6 of 80

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	20	7.3	20.0	
1,1-Dichloropropene	ND	20	9.3	20.0	
c-1,3-Dichloropropene	ND	10	4.9	20.0	
t-1,3-Dichloropropene	ND	10	5.1	20.0	
Ethylbenzene	ND	20	2.8	20.0	
2-Hexanone	ND	200	83	20.0	
Isopropylbenzene	ND	20	12	20.0	
p-Isopropyltoluene	ND	20	3.2	20.0	
Methylene Chloride	ND	200	77	20.0	
4-Methyl-2-Pentanone	ND	200	88	20.0	
Naphthalene	ND	200	100	20.0	
n-Propylbenzene	ND	20	3.5	20.0	
Styrene	ND	20	3.4	20.0	
1,1,1,2-Tetrachloroethane	ND	20	8.1	20.0	
1,1,2,2-Tetrachloroethane	ND	20	8.2	20.0	
Tetrachloroethene	10	20	7.7	20.0	J
Toluene	ND	20	4.7	20.0	
1,2,3-Trichlorobenzene	ND	20	10	20.0	
1,2,4-Trichlorobenzene	ND	20	10	20.0	
1,1,1-Trichloroethane	ND	20	6.1	20.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	200	78	20.0	
1,1,2-Trichloroethane	ND	20	7.7	20.0	
Trichloroethene	2000	20	7.4	20.0	
Trichlorofluoromethane	ND	200	66	20.0	
1,2,3-Trichloropropane	ND	100	13	20.0	
1,2,4-Trimethylbenzene	ND	20	7.2	20.0	
1,3,5-Trimethylbenzene	ND	20	5.7	20.0	
Vinyl Acetate	ND	200	110	20.0	
Vinyl Chloride	ND	10	6.0	20.0	
p/m-Xylene	ND	20	6.0	20.0	
o-Xylene	ND	20	4.6	20.0	
Methyl-t-Butyl Ether (MTBE)	ND	20	6.2	20.0	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	97	77-120	
Dibromofluoromethane	103	80-128	
1,2-Dichloroethane-d4	106	80-129	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 7 of 80

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
HEW-0100	16-12-2002-4-A	12/20/16 07:25	Aqueous	GC/MS XX	12/22/16	12/22/16 19:33	161222L005

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	400	200	20.0	
Benzene	ND	10	2.8	20.0	
Bromobenzene	ND	20	6.1	20.0	
Bromochloromethane	ND	20	9.5	20.0	
Bromodichloromethane	ND	20	4.1	20.0	
Bromoform	ND	20	10	20.0	
Bromomethane	ND	200	78	20.0	
2-Butanone	ND	200	88	20.0	
n-Butylbenzene	ND	20	4.6	20.0	
sec-Butylbenzene	ND	20	4.9	20.0	
tert-Butylbenzene	ND	20	5.5	20.0	
Carbon Disulfide	ND	200	82	20.0	
Carbon Tetrachloride	ND	10	4.5	20.0	
Chlorobenzene	ND	20	3.4	20.0	
Chloroethane	ND	100	46	20.0	
Chloroform	ND	20	9.2	20.0	
Chloromethane	ND	200	71	20.0	
2-Chlorotoluene	ND	20	4.8	20.0	
4-Chlorotoluene	ND	20	2.7	20.0	
Dibromochloromethane	ND	20	5.0	20.0	
1,2-Dibromo-3-Chloropropane	ND	100	25	20.0	
1,2-Dibromoethane	ND	20	7.2	20.0	
Dibromomethane	ND	20	9.2	20.0	
1,2-Dichlorobenzene	ND	20	9.1	20.0	
1,3-Dichlorobenzene	ND	20	8.0	20.0	
1,4-Dichlorobenzene	ND	20	8.6	20.0	
Dichlorodifluoromethane	ND	20	9.1	20.0	
1,1-Dichloroethane	ND	20	5.6	20.0	
1,2-Dichloroethane	ND	10	4.8	20.0	
1,1-Dichloroethene	ND	20	8.6	20.0	
c-1,2-Dichloroethene	ND	20	9.5	20.0	
t-1,2-Dichloroethene	ND	20	7.4	20.0	
1,2-Dichloropropane	ND	20	8.5	20.0	
1,3-Dichloropropane	ND	20	6.1	20.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 8 of 80

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	20	7.3	20.0	
1,1-Dichloropropene	ND	20	9.3	20.0	
c-1,3-Dichloropropene	ND	10	4.9	20.0	
t-1,3-Dichloropropene	ND	10	5.1	20.0	
Ethylbenzene	ND	20	2.8	20.0	
2-Hexanone	ND	200	83	20.0	
Isopropylbenzene	ND	20	12	20.0	
p-Isopropyltoluene	ND	20	3.2	20.0	
Methylene Chloride	ND	200	77	20.0	
4-Methyl-2-Pentanone	ND	200	88	20.0	
Naphthalene	ND	200	100	20.0	
n-Propylbenzene	ND	20	3.5	20.0	
Styrene	ND	20	3.4	20.0	
1,1,1,2-Tetrachloroethane	ND	20	8.1	20.0	
1,1,2,2-Tetrachloroethane	ND	20	8.2	20.0	
Tetrachloroethene	9.2	20	7.7	20.0	J
Toluene	ND	20	4.7	20.0	
1,2,3-Trichlorobenzene	ND	20	10	20.0	
1,2,4-Trichlorobenzene	ND	20	10	20.0	
1,1,1-Trichloroethane	ND	20	6.1	20.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	200	78	20.0	
1,1,2-Trichloroethane	ND	20	7.7	20.0	
Trichloroethene	2000	20	7.4	20.0	
Trichlorofluoromethane	ND	200	66	20.0	
1,2,3-Trichloropropane	ND	100	13	20.0	
1,2,4-Trimethylbenzene	ND	20	7.2	20.0	
1,3,5-Trimethylbenzene	ND	20	5.7	20.0	
Vinyl Acetate	ND	200	110	20.0	
Vinyl Chloride	ND	10	6.0	20.0	
p/m-Xylene	ND	20	6.0	20.0	
o-Xylene	ND	20	4.6	20.0	
Methyl-t-Butyl Ether (MTBE)	ND	20	6.2	20.0	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	97	77-120	
Dibromofluoromethane	102	80-128	
1,2-Dichloroethane-d4	106	80-129	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 9 of 80

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-18	16-12-2002-5-A	12/20/16 07:45	Aqueous	GC/MS XX	12/21/16	12/21/16 15:11	161221L004

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 10 of 80

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	1.2	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	99	77-120			
Dibromofluoromethane	104	80-128			
1,2-Dichloroethane-d4	104	80-129			
Toluene-d8	99	80-120			



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 11 of 80

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
AB-06	16-12-2002-6-A	12/20/16 08:15	Aqueous	GC/MS XX	12/21/16	12/21/16 11:33	161221L004

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	11	20	10	1.00	J
Benzene	0.19	0.50	0.14	1.00	J
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	3.6	5.0	2.3	1.00	J
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	3.9	1.0	0.48	1.00	
t-1,2-Dichloroethene	0.59	1.0	0.37	1.00	J
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 12 of 80

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	ND	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	100	77-120			
Dibromofluoromethane	103	80-128			
1,2-Dichloroethane-d4	103	80-129			
Toluene-d8	100	80-120			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 13 of 80

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UA-10D	16-12-2002-7-A	12/20/16 08:30	Aqueous	GC/MS XX	12/21/16	12/21/16 15:38	161221L004

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 14 of 80

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	11	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	ND	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	100	77-120	
Dibromofluoromethane	104	80-128	
1,2-Dichloroethane-d4	105	80-129	
Toluene-d8	100	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 15 of 80

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UB-04	16-12-2002-8-A	12/20/16 08:40	Aqueous	GC/MS XX	12/21/16	12/21/16 16:06	161221L004

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	1.5	1.0	0.48	1.00	
t-1,2-Dichloroethene	4.5	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 16 of 80

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	15	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	99	77-120			
Dibromofluoromethane	104	80-128			
1,2-Dichloroethane-d4	104	80-129			
Toluene-d8	100	80-120			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 17 of 80

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
RB-122016A	16-12-2002-9-A	12/20/16 08:50	Aqueous	GC/MS XX	12/21/16	12/21/16 16:33	161221L004

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 18 of 80

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	ND	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	99	77-120			
Dibromofluoromethane	104	80-128			
1,2-Dichloroethane-d4	105	80-129			
Toluene-d8	99	80-120			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 19 of 80

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
AB-08	16-12-2002-10-A	12/20/16 09:15	Aqueous	GC/MS XX	12/21/16	12/21/16 17:00	161221L004

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	3.9	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 20 of 80

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	0.47	1.0	0.37	1.00	J
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	0.48	0.50	0.30	1.00	J
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	100	77-120	
Dibromofluoromethane	106	80-128	
1,2-Dichloroethane-d4	104	80-129	
Toluene-d8	100	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 21 of 80

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UA-16D	16-12-2002-11-A	12/20/16 09:25	Aqueous	GC/MS XX	12/21/16	12/21/16 17:28	161221L004

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 22 of 80

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	ND	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	99	77-120			
Dibromofluoromethane	105	80-128			
1,2-Dichloroethane-d4	105	80-129			
Toluene-d8	100	80-120			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 23 of 80

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UA-17D	16-12-2002-12-A	12/20/16 09:35	Aqueous	GC/MS XX	12/21/16	12/21/16 17:55	161221L004

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 24 of 80

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	ND	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	1.6	1.0	0.31	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	99	77-120	
Dibromofluoromethane	106	80-128	
1,2-Dichloroethane-d4	104	80-129	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 12/20/16
Work Order: 16-12-2002
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 25 of 80

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UA-1700D	16-12-2002-13-A	12/20/16 09:40	Aqueous	GC/MS XX	12/21/16	12/21/16 18:22	161221L004

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 26 of 80

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	ND	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	1.7	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	98	77-120			
Dibromofluoromethane	107	80-128			
1,2-Dichloroethane-d4	105	80-129			
Toluene-d8	100	80-120			



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 27 of 80

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UB-06	16-12-2002-14-A	12/20/16 09:45	Aqueous	GC/MS XX	12/21/16	12/21/16 18:49	161221L004

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 28 of 80

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	5.8	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	0.34	0.50	0.30	1.00	J
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	100	77-120			
Dibromofluoromethane	106	80-128			
1,2-Dichloroethane-d4	105	80-129			
Toluene-d8	100	80-120			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 29 of 80

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
RB-122016B	16-12-2002-15-A	12/20/16 09:55	Aqueous	GC/MS XX	12/21/16	12/21/16 19:17	161221L004

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 30 of 80

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	ND	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	100	77-120			
Dibromofluoromethane	106	80-128			
1,2-Dichloroethane-d4	105	80-129			
Toluene-d8	100	80-120			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 31 of 80

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UB-02	16-12-2002-16-A	12/20/16 10:15	Aqueous	GC/MS XX	12/21/16	12/21/16 19:44	161221L004

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 32 of 80

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	ND	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	100	77-120			
Dibromofluoromethane	105	80-128			
1,2-Dichloroethane-d4	104	80-129			
Toluene-d8	100	80-120			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 33 of 80

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
AB-05	16-12-2002-17-B	12/20/16 10:30	Aqueous	GC/MS XX	12/22/16	12/22/16 11:19	161222L005

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	0.17	0.50	0.14	1.00	J
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 34 of 80

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	ND	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	98	77-120	
Dibromofluoromethane	105	80-128	
1,2-Dichloroethane-d4	105	80-129	
Toluene-d8	98	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 35 of 80

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UA-13D	16-12-2002-18-A	12/20/16 10:40	Aqueous	GC/MS XX	12/21/16	12/21/16 20:11	161221L004

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 36 of 80

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	0.78	1.0	0.37	1.00	J
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	99	77-120	
Dibromofluoromethane	106	80-128	
1,2-Dichloroethane-d4	105	80-129	
Toluene-d8	100	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 37 of 80

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UA-1300D	16-12-2002-19-A	12/20/16 10:45	Aqueous	GC/MS XX	12/21/16	12/22/16 06:37	161221L045

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 38 of 80

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	0.89	1.0	0.37	1.00	J
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	99	77-120			
Dibromofluoromethane	107	80-128			
1,2-Dichloroethane-d4	105	80-129			
Toluene-d8	100	80-120			



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 39 of 80

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
HEW-05	16-12-2002-20-A	12/20/16 11:30	Aqueous	GC/MS XX	12/21/16	12/21/16 23:49	161221L045

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	0.57	1.0	0.48	1.00	J
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 12/20/16
Work Order: 16-12-2002
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 40 of 80

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	200	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	99	77-120			
Dibromofluoromethane	101	80-128			
1,2-Dichloroethane-d4	102	80-129			
Toluene-d8	100	80-120			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 41 of 80

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-29	16-12-2002-21-A	12/20/16 12:10	Aqueous	GC/MS XX	12/21/16	12/21/16 20:38	161221L004

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 42 of 80

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	0.70	1.0	0.37	1.00	J
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	99	77-120	
Dibromofluoromethane	105	80-128	
1,2-Dichloroethane-d4	104	80-129	
Toluene-d8	100	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 43 of 80

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UA-12	16-12-2002-22-A	12/20/16 12:20	Aqueous	GC/MS XX	12/21/16	12/22/16 03:27	161221L045

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 44 of 80

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	0.56	1.0	0.39	1.00	J
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	3.4	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	100	77-120	
Dibromofluoromethane	104	80-128	
1,2-Dichloroethane-d4	102	80-129	
Toluene-d8	100	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 45 of 80

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UA-12D	16-12-2002-23-A	12/20/16 12:25	Aqueous	GC/MS XX	12/21/16	12/22/16 03:54	161221L045

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 46 of 80

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	0.52	1.0	0.39	1.00	J
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	0.40	1.0	0.37	1.00	J
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	99	77-120	
Dibromofluoromethane	103	80-128	
1,2-Dichloroethane-d4	103	80-129	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 47 of 80

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UB-05	16-12-2002-24-A	12/20/16 12:45	Aqueous	GC/MS XX	12/21/16	12/22/16 07:04	161221L045

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	4.2	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 48 of 80

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	0.54	1.0	0.37	1.00	J
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	0.31	0.50	0.30	1.00	J
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	100	77-120	
Dibromofluoromethane	106	80-128	
1,2-Dichloroethane-d4	105	80-129	
Toluene-d8	100	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 49 of 80

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
AB-07	16-12-2002-25-A	12/20/16 12:55	Aqueous	GC/MS XX	12/22/16	12/22/16 13:36	161222L005

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	3.3	1.0	0.48	1.00	
t-1,2-Dichloroethene	3.5	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 50 of 80

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	10	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	7.2	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	0.49	0.50	0.30	1.00	J
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	98	77-120	
Dibromofluoromethane	104	80-128	
1,2-Dichloroethane-d4	105	80-129	
Toluene-d8	98	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 51 of 80

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UA-14D	16-12-2002-26-A	12/20/16 13:05	Aqueous	GC/MS XX	12/21/16	12/22/16 04:21	161221L045

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 52 of 80

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	32	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	0.50	1.0	0.37	1.00	J
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	98	77-120	
Dibromofluoromethane	104	80-128	
1,2-Dichloroethane-d4	104	80-129	
Toluene-d8	100	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 53 of 80

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
RB-122016C	16-12-2002-27-A	12/20/16 13:15	Aqueous	GC/MS XX	12/21/16	12/22/16 04:48	161221L045

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 54 of 80

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	ND	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	100	77-120	
Dibromofluoromethane	105	80-128	
1,2-Dichloroethane-d4	103	80-129	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 55 of 80

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-30	16-12-2002-28-A	12/20/16 13:30	Aqueous	GC/MS XX	12/21/16	12/22/16 05:15	161221L045

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	0.95	1.0	0.43	1.00	J
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 56 of 80

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	0.37	1.0	0.37	1.00	J
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	99	77-120	
Dibromofluoromethane	105	80-128	
1,2-Dichloroethane-d4	105	80-129	
Toluene-d8	100	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 57 of 80

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UA-11D	16-12-2002-29-A	12/20/16 13:45	Aqueous	GC/MS XX	12/21/16	12/22/16 00:16	161221L045

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 58 of 80

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	1.3	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	6.6	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	99	77-120	
Dibromofluoromethane	104	80-128	
1,2-Dichloroethane-d4	104	80-129	
Toluene-d8	100	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 59 of 80

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UA-11	16-12-2002-30-A	12/20/16 13:55	Aqueous	GC/MS XX	12/21/16	12/22/16 05:43	161221L045

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 60 of 80

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	6.4	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	2.0	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	99	77-120			
Dibromofluoromethane	106	80-128			
1,2-Dichloroethane-d4	104	80-129			
Toluene-d8	100	80-120			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 12/20/16
Work Order: 16-12-2002
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 61 of 80

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UB-03	16-12-2002-31-A	12/20/16 14:05	Aqueous	GC/MS XX	12/22/16	12/22/16 14:03	161222L005

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	5.6	1.0	0.48	1.00	
t-1,2-Dichloroethene	11	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 62 of 80

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	2.5	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	2.8	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	99	77-120			
Dibromofluoromethane	104	80-128			
1,2-Dichloroethane-d4	105	80-129			
Toluene-d8	98	80-120			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 63 of 80

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-31	16-12-2002-32-A	12/20/16 14:20	Aqueous	GC/MS XX	12/21/16	12/22/16 06:10	161221L045

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	0.23	0.50	0.14	1.00	J
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 64 of 80

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	ND	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	100	77-120	
Dibromofluoromethane	107	80-128	
1,2-Dichloroethane-d4	105	80-129	
Toluene-d8	101	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 12/20/16
Work Order: 16-12-2002
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 65 of 80

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
UB-01	16-12-2002-33-A	12/20/16 14:35	Aqueous	GC/MS XX	12/22/16	12/22/16 14:30	161222L005

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 66 of 80

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	ND	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	98	77-120			
Dibromofluoromethane	104	80-128			
1,2-Dichloroethane-d4	105	80-129			
Toluene-d8	98	80-120			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 67 of 80

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SE-01	16-12-2002-34-A	12/20/16 14:50	Aqueous	GC/MS XX	12/22/16	12/22/16 20:01	161222L005

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	1000	500	50.0	
Benzene	ND	25	7.1	50.0	
Bromobenzene	ND	50	15	50.0	
Bromochloromethane	ND	50	24	50.0	
Bromodichloromethane	ND	50	10	50.0	
Bromoform	ND	50	25	50.0	
Bromomethane	ND	500	190	50.0	
2-Butanone	ND	500	220	50.0	
n-Butylbenzene	ND	50	11	50.0	
sec-Butylbenzene	ND	50	12	50.0	
tert-Butylbenzene	ND	50	14	50.0	
Carbon Disulfide	ND	500	200	50.0	
Carbon Tetrachloride	ND	25	11	50.0	
Chlorobenzene	ND	50	8.6	50.0	
Chloroethane	ND	250	110	50.0	
Chloroform	ND	50	23	50.0	
Chloromethane	ND	500	180	50.0	
2-Chlorotoluene	ND	50	12	50.0	
4-Chlorotoluene	ND	50	6.6	50.0	
Dibromochloromethane	ND	50	12	50.0	
1,2-Dibromo-3-Chloropropane	ND	250	62	50.0	
1,2-Dibromoethane	ND	50	18	50.0	
Dibromomethane	ND	50	23	50.0	
1,2-Dichlorobenzene	ND	50	23	50.0	
1,3-Dichlorobenzene	ND	50	20	50.0	
1,4-Dichlorobenzene	ND	50	22	50.0	
Dichlorodifluoromethane	ND	50	23	50.0	
1,1-Dichloroethane	ND	50	14	50.0	
1,2-Dichloroethane	ND	25	12	50.0	
1,1-Dichloroethene	ND	50	22	50.0	
c-1,2-Dichloroethene	ND	50	24	50.0	
t-1,2-Dichloroethene	ND	50	18	50.0	
1,2-Dichloropropane	ND	50	21	50.0	
1,3-Dichloropropane	ND	50	15	50.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 68 of 80

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	50	18	50.0	
1,1-Dichloropropene	ND	50	23	50.0	
c-1,3-Dichloropropene	ND	25	12	50.0	
t-1,3-Dichloropropene	ND	25	13	50.0	
Ethylbenzene	ND	50	6.9	50.0	
2-Hexanone	ND	500	210	50.0	
Isopropylbenzene	ND	50	29	50.0	
p-Isopropyltoluene	ND	50	7.9	50.0	
Methylene Chloride	ND	500	190	50.0	
4-Methyl-2-Pentanone	ND	500	220	50.0	
Naphthalene	ND	500	250	50.0	
n-Propylbenzene	ND	50	8.6	50.0	
Styrene	ND	50	8.6	50.0	
1,1,1,2-Tetrachloroethane	ND	50	20	50.0	
1,1,2,2-Tetrachloroethane	ND	50	20	50.0	
Tetrachloroethene	130	50	19	50.0	
Toluene	ND	50	12	50.0	
1,2,3-Trichlorobenzene	ND	50	25	50.0	
1,2,4-Trichlorobenzene	ND	50	25	50.0	
1,1,1-Trichloroethane	ND	50	15	50.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	500	200	50.0	
1,1,2-Trichloroethane	ND	50	19	50.0	
Trichloroethene	6400	50	18	50.0	
Trichlorofluoromethane	ND	500	170	50.0	
1,2,3-Trichloropropane	ND	250	32	50.0	
1,2,4-Trimethylbenzene	ND	50	18	50.0	
1,3,5-Trimethylbenzene	ND	50	14	50.0	
Vinyl Acetate	ND	500	280	50.0	
Vinyl Chloride	ND	25	15	50.0	
p/m-Xylene	ND	50	15	50.0	
o-Xylene	ND	50	11	50.0	
Methyl-t-Butyl Ether (MTBE)	ND	50	15	50.0	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	97	77-120	
Dibromofluoromethane	102	80-128	
1,2-Dichloroethane-d4	107	80-129	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 69 of 80

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-08	16-12-2002-35-A	12/20/16 15:05	Aqueous	GC/MS XX	12/22/16	12/22/16 20:28	161222L005

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	1000	500	50.0	
Benzene	ND	25	7.1	50.0	
Bromobenzene	ND	50	15	50.0	
Bromochloromethane	ND	50	24	50.0	
Bromodichloromethane	ND	50	10	50.0	
Bromoform	ND	50	25	50.0	
Bromomethane	ND	500	190	50.0	
2-Butanone	ND	500	220	50.0	
n-Butylbenzene	ND	50	11	50.0	
sec-Butylbenzene	ND	50	12	50.0	
tert-Butylbenzene	ND	50	14	50.0	
Carbon Disulfide	ND	500	200	50.0	
Carbon Tetrachloride	ND	25	11	50.0	
Chlorobenzene	ND	50	8.6	50.0	
Chloroethane	ND	250	110	50.0	
Chloroform	ND	50	23	50.0	
Chloromethane	ND	500	180	50.0	
2-Chlorotoluene	ND	50	12	50.0	
4-Chlorotoluene	ND	50	6.6	50.0	
Dibromochloromethane	ND	50	12	50.0	
1,2-Dibromo-3-Chloropropane	ND	250	62	50.0	
1,2-Dibromoethane	ND	50	18	50.0	
Dibromomethane	ND	50	23	50.0	
1,2-Dichlorobenzene	ND	50	23	50.0	
1,3-Dichlorobenzene	ND	50	20	50.0	
1,4-Dichlorobenzene	ND	50	22	50.0	
Dichlorodifluoromethane	ND	50	23	50.0	
1,1-Dichloroethane	ND	50	14	50.0	
1,2-Dichloroethane	ND	25	12	50.0	
1,1-Dichloroethene	ND	50	22	50.0	
c-1,2-Dichloroethene	ND	50	24	50.0	
t-1,2-Dichloroethene	ND	50	18	50.0	
1,2-Dichloropropane	ND	50	21	50.0	
1,3-Dichloropropane	ND	50	15	50.0	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 70 of 80

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	50	18	50.0	
1,1-Dichloropropene	ND	50	23	50.0	
c-1,3-Dichloropropene	ND	25	12	50.0	
t-1,3-Dichloropropene	ND	25	13	50.0	
Ethylbenzene	ND	50	6.9	50.0	
2-Hexanone	ND	500	210	50.0	
Isopropylbenzene	ND	50	29	50.0	
p-Isopropyltoluene	ND	50	7.9	50.0	
Methylene Chloride	ND	500	190	50.0	
4-Methyl-2-Pentanone	ND	500	220	50.0	
Naphthalene	ND	500	250	50.0	
n-Propylbenzene	ND	50	8.6	50.0	
Styrene	ND	50	8.6	50.0	
1,1,1,2-Tetrachloroethane	ND	50	20	50.0	
1,1,2,2-Tetrachloroethane	ND	50	20	50.0	
Tetrachloroethene	610	50	19	50.0	
Toluene	ND	50	12	50.0	
1,2,3-Trichlorobenzene	ND	50	25	50.0	
1,2,4-Trichlorobenzene	ND	50	25	50.0	
1,1,1-Trichloroethane	ND	50	15	50.0	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	500	200	50.0	
1,1,2-Trichloroethane	ND	50	19	50.0	
Trichlorofluoromethane	ND	500	170	50.0	
1,2,3-Trichloropropane	ND	250	32	50.0	
1,2,4-Trimethylbenzene	ND	50	18	50.0	
1,3,5-Trimethylbenzene	ND	50	14	50.0	
Vinyl Acetate	ND	500	280	50.0	
Vinyl Chloride	ND	25	15	50.0	
p/m-Xylene	ND	50	15	50.0	
o-Xylene	ND	50	11	50.0	
Methyl-t-Butyl Ether (MTBE)	ND	50	15	50.0	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	98	77-120	
Dibromofluoromethane	102	80-128	
1,2-Dichloroethane-d4	106	80-129	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.	Date Received:	12/20/16
9171 Towne Centre Drive, Suite 375	Work Order:	16-12-2002
San Diego, CA 92122-6215	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/L

Project: Building 684 - Raytheon Task No. 764.10 Page 71 of 80

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
S-08	16-12-2002-35-B	12/20/16 15:05	Aqueous	GC/MS XX	12/23/16	12/23/16 12:51	161223L004

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Trichloroethene	20000	200	74	200	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	99	77-120	
Dibromofluoromethane	95	80-128	
1,2-Dichloroethane-d4	100	80-129	
Toluene-d8	98	80-120	

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 72 of 80

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
HEW-02	16-12-2002-36-A	12/20/16 16:20	Aqueous	GC/MS XX	12/22/16	12/22/16 14:58	161222L005

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	0.18	1.0	0.17	1.00	J
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	1.7	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 73 of 80

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	0.68	1.0	0.39	1.00	J
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	170	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	96	77-120	
Dibromofluoromethane	103	80-128	
1,2-Dichloroethane-d4	105	80-129	
Toluene-d8	98	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 74 of 80

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-001-22149	N/A	Aqueous	GC/MS XX	12/21/16	12/21/16 10:38	161221L004

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 75 of 80

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	ND	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	99	77-120			
Dibromofluoromethane	103	80-128			
1,2-Dichloroethane-d4	103	80-129			
Toluene-d8	100	80-120			



 Return to Contents

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 76 of 80

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-001-22159	N/A	Aqueous	GC/MS XX	12/21/16	12/21/16 23:22	161221L045

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 77 of 80

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	ND	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	100	77-120			
Dibromofluoromethane	104	80-128			
1,2-Dichloroethane-d4	105	80-129			
Toluene-d8	100	80-120			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 78 of 80

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-001-22160	N/A	Aqueous	GC/MS XX	12/22/16	12/22/16 10:52	161222L005

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Acetone	ND	20	10	1.00	
Benzene	ND	0.50	0.14	1.00	
Bromobenzene	ND	1.0	0.30	1.00	
Bromochloromethane	ND	1.0	0.48	1.00	
Bromodichloromethane	ND	1.0	0.21	1.00	
Bromoform	ND	1.0	0.50	1.00	
Bromomethane	ND	10	3.9	1.00	
2-Butanone	ND	10	4.4	1.00	
n-Butylbenzene	ND	1.0	0.23	1.00	
sec-Butylbenzene	ND	1.0	0.25	1.00	
tert-Butylbenzene	ND	1.0	0.28	1.00	
Carbon Disulfide	ND	10	4.1	1.00	
Carbon Tetrachloride	ND	0.50	0.23	1.00	
Chlorobenzene	ND	1.0	0.17	1.00	
Chloroethane	ND	5.0	2.3	1.00	
Chloroform	ND	1.0	0.46	1.00	
Chloromethane	ND	10	3.5	1.00	
2-Chlorotoluene	ND	1.0	0.24	1.00	
4-Chlorotoluene	ND	1.0	0.13	1.00	
Dibromochloromethane	ND	1.0	0.25	1.00	
1,2-Dibromo-3-Chloropropane	ND	5.0	1.2	1.00	
1,2-Dibromoethane	ND	1.0	0.36	1.00	
Dibromomethane	ND	1.0	0.46	1.00	
1,2-Dichlorobenzene	ND	1.0	0.46	1.00	
1,3-Dichlorobenzene	ND	1.0	0.40	1.00	
1,4-Dichlorobenzene	ND	1.0	0.43	1.00	
Dichlorodifluoromethane	ND	1.0	0.46	1.00	
1,1-Dichloroethane	ND	1.0	0.28	1.00	
1,2-Dichloroethane	ND	0.50	0.24	1.00	
1,1-Dichloroethene	ND	1.0	0.43	1.00	
c-1,2-Dichloroethene	ND	1.0	0.48	1.00	
t-1,2-Dichloroethene	ND	1.0	0.37	1.00	
1,2-Dichloropropane	ND	1.0	0.42	1.00	
1,3-Dichloropropane	ND	1.0	0.30	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B
 Units: ug/L

Project: Building 684 - Raytheon Task No. 764.10

Page 79 of 80

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
2,2-Dichloropropane	ND	1.0	0.36	1.00	
1,1-Dichloropropene	ND	1.0	0.46	1.00	
c-1,3-Dichloropropene	ND	0.50	0.25	1.00	
t-1,3-Dichloropropene	ND	0.50	0.25	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
2-Hexanone	ND	10	4.2	1.00	
Isopropylbenzene	ND	1.0	0.58	1.00	
p-Isopropyltoluene	ND	1.0	0.16	1.00	
Methylene Chloride	ND	10	3.8	1.00	
4-Methyl-2-Pentanone	ND	10	4.4	1.00	
Naphthalene	ND	10	5.0	1.00	
n-Propylbenzene	ND	1.0	0.17	1.00	
Styrene	ND	1.0	0.17	1.00	
1,1,1,2-Tetrachloroethane	ND	1.0	0.40	1.00	
1,1,2,2-Tetrachloroethane	ND	1.0	0.41	1.00	
Tetrachloroethene	ND	1.0	0.39	1.00	
Toluene	ND	1.0	0.24	1.00	
1,2,3-Trichlorobenzene	ND	1.0	0.51	1.00	
1,2,4-Trichlorobenzene	ND	1.0	0.50	1.00	
1,1,1-Trichloroethane	ND	1.0	0.30	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	10	3.9	1.00	
1,1,2-Trichloroethane	ND	1.0	0.38	1.00	
Trichloroethene	ND	1.0	0.37	1.00	
Trichlorofluoromethane	ND	10	3.3	1.00	
1,2,3-Trichloropropane	ND	5.0	0.64	1.00	
1,2,4-Trimethylbenzene	ND	1.0	0.36	1.00	
1,3,5-Trimethylbenzene	ND	1.0	0.28	1.00	
Vinyl Acetate	ND	10	5.6	1.00	
Vinyl Chloride	ND	0.50	0.30	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	
<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>		
1,4-Bromofluorobenzene	98	77-120			
Dibromofluoromethane	102	80-128			
1,2-Dichloroethane-d4	105	80-129			
Toluene-d8	99	80-120			

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

Hargis + Associates, Inc.	Date Received:	12/20/16
9171 Towne Centre Drive, Suite 375	Work Order:	16-12-2002
San Diego, CA 92122-6215	Preparation:	EPA 5030C
	Method:	EPA 8260B
	Units:	ug/L

Project: Building 684 - Raytheon Task No. 764.10 Page 80 of 80

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-001-22174	N/A	Aqueous	GC/MS XX	12/23/16	12/23/16 11:56	161223L004

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Trichloroethene	ND	1.0	0.37	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	97	77-120	
Dibromofluoromethane	101	80-128	
1,2-Dichloroethane-d4	105	80-129	
Toluene-d8	97	80-120	



Calscience

Quality Control - Spike/Spike Duplicate

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 12/20/16
Work Order: 16-12-2002
Preparation: EPA 3510C
Method: EPA 8270C (M) Isotope Dilution

Project: Building 684 - Raytheon Task No. 764.10

Page 1 of 11

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
HEW-05	Sample	Aqueous	GC/MS DDD	12/21/16	12/21/16 23:25	161221S12
HEW-05	Matrix Spike	Aqueous	GC/MS DDD	12/21/16	12/21/16 22:04	161221S12
HEW-05	Matrix Spike Duplicate	Aqueous	GC/MS DDD	12/21/16	12/21/16 22:21	161221S12

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
1,4-Dioxane	ND	20.00	22.03	110	20.69	103	50-130	6	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 12/20/16
Work Order: 16-12-2002
Preparation: EPA 5030C
Method: EPA 8260B

Project: Building 684 - Raytheon Task No. 764.10

Page 2 of 11

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
AB-06	Sample	Aqueous	GC/MS XX	12/21/16	12/21/16 11:33	161221S002
AB-06	Matrix Spike	Aqueous	GC/MS XX	12/21/16	12/21/16 12:00	161221S002
AB-06	Matrix Spike Duplicate	Aqueous	GC/MS XX	12/21/16	12/21/16 12:28	161221S002

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Acetone	ND	50.00	59.10	118	59.88	120	34-166	1	0-33	
Benzene	ND	50.00	53.28	107	50.36	101	75-125	6	0-20	
Bromobenzene	ND	50.00	53.80	108	50.43	101	75-125	6	0-20	
Bromochloromethane	ND	50.00	53.04	106	50.79	102	75-125	4	0-20	
Bromodichloromethane	ND	50.00	58.45	117	55.62	111	75-134	5	0-20	
Bromoform	ND	50.00	53.25	107	52.61	105	74-134	1	0-20	
Bromomethane	ND	50.00	44.22	88	44.83	90	20-168	1	0-40	
2-Butanone	ND	50.00	51.87	104	49.43	99	37-157	5	0-20	
n-Butylbenzene	ND	50.00	56.34	113	53.81	108	73-145	5	0-20	
sec-Butylbenzene	ND	50.00	54.13	108	52.56	105	75-135	3	0-20	
tert-Butylbenzene	ND	50.00	54.70	109	52.66	105	75-136	4	0-20	
Carbon Disulfide	ND	50.00	44.47	89	45.38	91	50-152	2	0-27	
Carbon Tetrachloride	ND	50.00	54.18	108	57.51	115	70-154	6	0-20	
Chlorobenzene	ND	50.00	51.84	104	48.80	98	75-125	6	0-20	
Chloroethane	ND	50.00	57.05	114	59.40	119	41-167	4	0-26	
Chloroform	ND	50.00	53.36	107	51.12	102	75-127	4	0-20	
Chloromethane	ND	50.00	52.56	105	50.62	101	41-149	4	0-20	
2-Chlorotoluene	ND	50.00	53.85	108	50.07	100	75-128	7	0-20	
4-Chlorotoluene	ND	50.00	52.46	105	49.54	99	75-125	6	0-20	
Dibromochloromethane	ND	50.00	49.57	99	48.31	97	75-131	3	0-20	
1,2-Dibromo-3-Chloropropane	ND	50.00	51.61	103	50.35	101	64-142	2	0-20	
1,2-Dibromoethane	ND	50.00	50.68	101	48.69	97	75-129	4	0-20	
Dibromomethane	ND	50.00	51.38	103	48.68	97	75-125	5	0-20	
1,2-Dichlorobenzene	ND	50.00	53.34	107	49.65	99	75-125	7	0-20	
1,3-Dichlorobenzene	ND	50.00	51.88	104	49.07	98	75-125	6	0-20	
1,4-Dichlorobenzene	ND	50.00	51.23	102	48.09	96	75-125	6	0-20	
Dichlorodifluoromethane	ND	50.00	52.78	106	55.92	112	25-157	6	0-26	
1,1-Dichloroethane	ND	50.00	53.42	107	51.04	102	73-139	5	0-20	
1,2-Dichloroethane	ND	50.00	53.21	106	49.44	99	75-125	7	0-20	
1,1-Dichloroethene	ND	50.00	48.96	98	49.29	99	61-145	1	0-20	
c-1,2-Dichloroethene	3.863	50.00	56.87	106	54.58	101	75-125	4	0-20	
t-1,2-Dichloroethene	ND	50.00	49.81	100	49.18	98	64-142	1	0-20	
1,2-Dichloropropane	ND	50.00	54.75	110	51.13	102	75-127	7	0-20	
1,3-Dichloropropane	ND	50.00	51.93	104	49.51	99	75-125	5	0-20	
2,2-Dichloropropane	ND	50.00	56.95	114	60.09	120	24-180	5	0-20	

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 12/20/16
Work Order: 16-12-2002
Preparation: EPA 5030C
Method: EPA 8260B

Project: Building 684 - Raytheon Task No. 764.10

Page 3 of 11

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
1,1-Dichloropropene	ND	50.00	50.75	101	50.97	102	75-135	0	0-20	
c-1,3-Dichloropropene	ND	50.00	52.77	106	51.76	104	75-137	2	0-20	
t-1,3-Dichloropropene	ND	50.00	52.55	105	52.68	105	74-146	0	0-20	
Ethylbenzene	ND	50.00	53.02	106	50.64	101	75-129	5	0-20	
2-Hexanone	ND	50.00	57.20	114	53.39	107	47-161	7	0-20	
Isopropylbenzene	ND	50.00	55.03	110	52.82	106	75-135	4	0-20	
p-Isopropyltoluene	ND	50.00	55.09	110	52.42	105	75-136	5	0-20	
Methylene Chloride	ND	50.00	51.04	102	48.60	97	63-141	5	0-20	
4-Methyl-2-Pentanone	ND	50.00	57.37	115	53.58	107	66-138	7	0-20	
Naphthalene	ND	50.00	54.46	109	52.08	104	59-143	4	0-20	
n-Propylbenzene	ND	50.00	54.61	109	51.45	103	75-133	6	0-20	
Styrene	ND	50.00	54.65	109	51.61	103	70-142	6	0-28	
1,1,1,2-Tetrachloroethane	ND	50.00	56.57	113	55.22	110	75-139	2	0-20	
1,1,2,2-Tetrachloroethane	ND	50.00	54.67	109	52.68	105	61-145	4	0-20	
Tetrachloroethene	ND	50.00	46.82	94	44.72	89	47-143	5	0-20	
Toluene	ND	50.00	54.01	108	50.61	101	75-125	7	0-20	
1,2,3-Trichlorobenzene	ND	50.00	55.92	112	51.46	103	73-133	8	0-20	
1,2,4-Trichlorobenzene	ND	50.00	56.01	112	51.36	103	71-137	9	0-20	
1,1,1-Trichloroethane	ND	50.00	54.98	110	56.54	113	75-136	3	0-20	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50.00	46.60	93	48.13	96	42-168	3	0-22	
1,1,2-Trichloroethane	ND	50.00	51.67	103	49.98	100	75-125	3	0-20	
Trichloroethene	ND	50.00	51.31	103	48.72	97	67-139	5	0-20	
Trichlorofluoromethane	ND	50.00	59.00	118	61.81	124	59-155	5	0-20	
1,2,3-Trichloropropane	ND	50.00	54.29	109	51.97	104	75-127	4	0-20	
1,2,4-Trimethylbenzene	ND	50.00	53.54	107	50.36	101	75-133	6	0-20	
1,3,5-Trimethylbenzene	ND	50.00	54.74	109	51.55	103	75-135	6	0-20	
Vinyl Acetate	ND	50.00	60.05	120	58.87	118	54-180	2	0-25	
Vinyl Chloride	ND	50.00	58.78	118	59.45	119	51-153	1	0-20	
p/m-Xylene	ND	100.0	106.5	107	101.0	101	75-133	5	0-20	
o-Xylene	ND	50.00	54.58	109	51.57	103	75-134	6	0-20	
Methyl-t-Butyl Ether (MTBE)	ND	50.00	51.58	103	50.11	100	64-136	3	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 12/20/16
Work Order: 16-12-2002
Preparation: EPA 5030C
Method: EPA 8260B

Project: Building 684 - Raytheon Task No. 764.10

Page 4 of 11

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
HEW-05	Sample	Aqueous	GC/MS XX	12/21/16	12/21/16 23:49	161221S018
HEW-05	Matrix Spike	Aqueous	GC/MS XX	12/21/16	12/22/16 00:43	161221S018
HEW-05	Matrix Spike Duplicate	Aqueous	GC/MS XX	12/21/16	12/22/16 01:11	161221S018

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Acetone	ND	50.00	55.32	111	56.66	113	34-166	2	0-33	
Benzene	ND	50.00	49.50	99	51.05	102	75-125	3	0-20	
Bromobenzene	ND	50.00	50.16	100	51.15	102	75-125	2	0-20	
Bromochloromethane	ND	50.00	51.90	104	53.15	106	75-125	2	0-20	
Bromodichloromethane	ND	50.00	56.06	112	57.84	116	75-134	3	0-20	
Bromoform	ND	50.00	52.11	104	53.49	107	74-134	3	0-20	
Bromomethane	ND	50.00	36.42	73	38.09	76	20-168	4	0-40	
2-Butanone	ND	50.00	49.57	99	49.19	98	37-157	1	0-20	
n-Butylbenzene	ND	50.00	47.43	95	50.55	101	73-145	6	0-20	
sec-Butylbenzene	ND	50.00	47.47	95	50.17	100	75-135	6	0-20	
tert-Butylbenzene	ND	50.00	49.23	98	50.80	102	75-136	3	0-20	
Carbon Disulfide	ND	50.00	39.33	79	43.15	86	50-152	9	0-27	
Carbon Tetrachloride	ND	50.00	48.81	98	55.67	111	70-154	13	0-20	
Chlorobenzene	ND	50.00	48.26	97	50.15	100	75-125	4	0-20	
Chloroethane	ND	50.00	57.19	114	60.29	121	41-167	5	0-26	
Chloroform	ND	50.00	50.86	102	52.61	105	75-127	3	0-20	
Chloromethane	ND	50.00	43.45	87	44.59	89	41-149	3	0-20	
2-Chlorotoluene	ND	50.00	48.89	98	51.28	103	75-128	5	0-20	
4-Chlorotoluene	ND	50.00	47.58	95	49.45	99	75-125	4	0-20	
Dibromochloromethane	ND	50.00	48.67	97	50.03	100	75-131	3	0-20	
1,2-Dibromo-3-Chloropropane	ND	50.00	48.45	97	49.34	99	64-142	2	0-20	
1,2-Dibromoethane	ND	50.00	49.43	99	49.84	100	75-129	1	0-20	
Dibromomethane	ND	50.00	50.20	100	50.66	101	75-125	1	0-20	
1,2-Dichlorobenzene	ND	50.00	49.52	99	50.40	101	75-125	2	0-20	
1,3-Dichlorobenzene	ND	50.00	47.44	95	49.06	98	75-125	3	0-20	
1,4-Dichlorobenzene	ND	50.00	46.93	94	48.23	96	75-125	3	0-20	
Dichlorodifluoromethane	ND	50.00	43.22	86	46.07	92	25-157	6	0-26	
1,1-Dichloroethane	ND	50.00	49.48	99	51.84	104	73-139	5	0-20	
1,2-Dichloroethane	ND	50.00	51.71	103	51.62	103	75-125	0	0-20	
1,1-Dichloroethene	ND	50.00	44.23	88	47.26	95	61-145	7	0-20	
c-1,2-Dichloroethene	ND	50.00	50.22	100	52.59	105	75-125	5	0-20	
t-1,2-Dichloroethene	ND	50.00	45.99	92	48.76	98	64-142	6	0-20	
1,2-Dichloropropane	ND	50.00	52.04	104	52.94	106	75-127	2	0-20	
1,3-Dichloropropane	ND	50.00	50.58	101	50.78	102	75-125	0	0-20	
2,2-Dichloropropane	ND	50.00	37.82	76	42.09	84	24-180	11	0-20	

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 12/20/16
Work Order: 16-12-2002
Preparation: EPA 5030C
Method: EPA 8260B

Project: Building 684 - Raytheon Task No. 764.10

Page 5 of 11

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
1,1-Dichloropropene	ND	50.00	45.55	91	48.96	98	75-135	7	0-20	
c-1,3-Dichloropropene	ND	50.00	48.08	96	51.06	102	75-137	6	0-20	
t-1,3-Dichloropropene	ND	50.00	47.86	96	51.04	102	74-146	6	0-20	
Ethylbenzene	ND	50.00	48.15	96	50.54	101	75-129	5	0-20	
2-Hexanone	ND	50.00	52.04	104	49.50	99	47-161	5	0-20	
Isopropylbenzene	ND	50.00	49.00	98	51.91	104	75-135	6	0-20	
p-Isopropyltoluene	ND	50.00	47.23	94	49.92	100	75-136	6	0-20	
Methylene Chloride	ND	50.00	48.91	98	51.61	103	63-141	5	0-20	
4-Methyl-2-Pentanone	ND	50.00	51.68	103	51.07	102	66-138	1	0-20	
Naphthalene	ND	50.00	49.98	100	50.12	100	59-143	0	0-20	
n-Propylbenzene	ND	50.00	48.48	97	51.26	103	75-133	6	0-20	
Styrene	ND	50.00	50.14	100	51.85	104	70-142	3	0-28	
1,1,1,2-Tetrachloroethane	ND	50.00	54.89	110	57.76	116	75-139	5	0-20	
1,1,2,2-Tetrachloroethane	ND	50.00	52.88	106	52.01	104	61-145	2	0-20	
Tetrachloroethene	ND	50.00	42.27	85	44.59	89	47-143	5	0-20	
Toluene	ND	50.00	49.51	99	51.43	103	75-125	4	0-20	
1,2,3-Trichlorobenzene	ND	50.00	50.54	101	51.64	103	73-133	2	0-20	
1,2,4-Trichlorobenzene	ND	50.00	49.38	99	50.74	101	71-137	3	0-20	
1,1,1-Trichloroethane	ND	50.00	50.51	101	55.79	112	75-136	10	0-20	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50.00	36.36	73	40.28	81	42-168	10	0-22	
1,1,2-Trichloroethane	ND	50.00	50.99	102	51.08	102	75-125	0	0-20	
Trichloroethene	198.6	50.00	229.4	62	233.7	70	67-139	2	0-20	3
Trichlorofluoromethane	ND	50.00	52.73	105	54.95	110	59-155	4	0-20	
1,2,3-Trichloropropane	ND	50.00	51.90	104	51.67	103	75-127	0	0-20	
1,2,4-Trimethylbenzene	ND	50.00	47.25	94	49.30	99	75-133	4	0-20	
1,3,5-Trimethylbenzene	ND	50.00	48.86	98	51.70	103	75-135	6	0-20	
Vinyl Acetate	ND	50.00	52.29	105	52.94	106	54-180	1	0-25	
Vinyl Chloride	ND	50.00	53.57	107	55.96	112	51-153	4	0-20	
p/m-Xylene	ND	100.0	96.68	97	101.4	101	75-133	5	0-20	
o-Xylene	ND	50.00	50.39	101	52.57	105	75-134	4	0-20	
Methyl-t-Butyl Ether (MTBE)	ND	50.00	51.03	102	52.61	105	64-136	3	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 12/20/16
Work Order: 16-12-2002
Preparation: EPA 5030C
Method: EPA 8260B

Project: Building 684 - Raytheon Task No. 764.10

Page 6 of 11

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
UA-11D	Sample	Aqueous	GC/MS XX	12/21/16	12/22/16 00:16	161221S019
UA-11D	Matrix Spike	Aqueous	GC/MS XX	12/21/16	12/22/16 01:38	161221S019
UA-11D	Matrix Spike Duplicate	Aqueous	GC/MS XX	12/21/16	12/22/16 02:05	161221S019

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Acetone	ND	50.00	59.06	118	59.18	118	34-166	0	0-33	
Benzene	ND	50.00	49.48	99	50.55	101	75-125	2	0-20	
Bromobenzene	ND	50.00	49.14	98	50.14	100	75-125	2	0-20	
Bromochloromethane	ND	50.00	50.22	100	50.82	102	75-125	1	0-20	
Bromodichloromethane	ND	50.00	55.94	112	56.89	114	75-134	2	0-20	
Bromoform	ND	50.00	52.97	106	53.84	108	74-134	2	0-20	
Bromomethane	ND	50.00	40.42	81	41.28	83	20-168	2	0-40	
2-Butanone	ND	50.00	50.73	101	50.54	101	37-157	0	0-20	
n-Butylbenzene	ND	50.00	48.57	97	50.47	101	73-145	4	0-20	
sec-Butylbenzene	ND	50.00	49.63	99	51.04	102	75-135	3	0-20	
tert-Butylbenzene	ND	50.00	50.79	102	52.18	104	75-136	3	0-20	
Carbon Disulfide	ND	50.00	43.12	86	43.86	88	50-152	2	0-27	
Carbon Tetrachloride	ND	50.00	57.19	114	58.44	117	70-154	2	0-20	
Chlorobenzene	ND	50.00	47.59	95	48.77	98	75-125	2	0-20	
Chloroethane	ND	50.00	58.15	116	57.76	116	41-167	1	0-26	
Chloroform	ND	50.00	50.60	101	51.70	103	75-127	2	0-20	
Chloromethane	ND	50.00	46.11	92	48.19	96	41-149	4	0-20	
2-Chlorotoluene	ND	50.00	49.01	98	50.02	100	75-128	2	0-20	
4-Chlorotoluene	ND	50.00	47.76	96	48.59	97	75-125	2	0-20	
Dibromochloromethane	ND	50.00	47.90	96	48.65	97	75-131	2	0-20	
1,2-Dibromo-3-Chloropropane	ND	50.00	51.17	102	51.88	104	64-142	1	0-20	
1,2-Dibromoethane	ND	50.00	47.98	96	49.10	98	75-129	2	0-20	
Dibromomethane	ND	50.00	48.82	98	49.28	99	75-125	1	0-20	
1,2-Dichlorobenzene	ND	50.00	48.20	96	49.07	98	75-125	2	0-20	
1,3-Dichlorobenzene	ND	50.00	46.89	94	48.09	96	75-125	3	0-20	
1,4-Dichlorobenzene	ND	50.00	46.15	92	47.13	94	75-125	2	0-20	
Dichlorodifluoromethane	ND	50.00	50.73	101	50.87	102	25-157	0	0-26	
1,1-Dichloroethane	ND	50.00	50.68	101	52.23	104	73-139	3	0-20	
1,2-Dichloroethane	ND	50.00	50.08	100	50.46	101	75-125	1	0-20	
1,1-Dichloroethene	ND	50.00	47.63	95	48.12	96	61-145	1	0-20	
c-1,2-Dichloroethene	ND	50.00	50.26	101	51.15	102	75-125	2	0-20	
t-1,2-Dichloroethene	ND	50.00	47.83	96	48.97	98	64-142	2	0-20	
1,2-Dichloropropane	ND	50.00	51.16	102	52.17	104	75-127	2	0-20	
1,3-Dichloropropane	ND	50.00	48.95	98	49.67	99	75-125	1	0-20	
2,2-Dichloropropane	ND	50.00	42.36	85	43.47	87	24-180	3	0-20	

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 12/20/16
Work Order: 16-12-2002
Preparation: EPA 5030C
Method: EPA 8260B

Project: Building 684 - Raytheon Task No. 764.10

Page 7 of 11

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
1,1-Dichloropropene	ND	50.00	49.13	98	50.46	101	75-135	3	0-20	
c-1,3-Dichloropropene	ND	50.00	49.03	98	50.23	100	75-137	2	0-20	
t-1,3-Dichloropropene	ND	50.00	49.68	99	50.77	102	74-146	2	0-20	
Ethylbenzene	ND	50.00	48.31	97	49.55	99	75-129	3	0-20	
2-Hexanone	ND	50.00	53.18	106	55.59	111	47-161	4	0-20	
Isopropylbenzene	ND	50.00	50.34	101	51.59	103	75-135	2	0-20	
p-Isopropyltoluene	ND	50.00	48.54	97	50.31	101	75-136	4	0-20	
Methylene Chloride	ND	50.00	49.10	98	49.65	99	63-141	1	0-20	
4-Methyl-2-Pentanone	ND	50.00	54.07	108	54.43	109	66-138	1	0-20	
Naphthalene	ND	50.00	50.52	101	51.85	104	59-143	3	0-20	
n-Propylbenzene	ND	50.00	49.35	99	50.26	101	75-133	2	0-20	
Styrene	ND	50.00	49.48	99	50.61	101	70-142	2	0-28	
1,1,1,2-Tetrachloroethane	ND	50.00	55.45	111	56.32	113	75-139	2	0-20	
1,1,2,2-Tetrachloroethane	ND	50.00	51.82	104	52.65	105	61-145	2	0-20	
Tetrachloroethene	1.289	50.00	45.61	89	45.70	89	47-143	0	0-20	
Toluene	ND	50.00	49.55	99	50.60	101	75-125	2	0-20	
1,2,3-Trichlorobenzene	ND	50.00	49.54	99	51.29	103	73-133	3	0-20	
1,2,4-Trichlorobenzene	ND	50.00	48.46	97	50.19	100	71-137	4	0-20	
1,1,1-Trichloroethane	ND	50.00	56.35	113	57.90	116	75-136	3	0-20	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50.00	44.27	89	44.85	90	42-168	1	0-22	
1,1,2-Trichloroethane	ND	50.00	48.87	98	49.66	99	75-125	2	0-20	
Trichloroethene	6.558	50.00	52.21	91	52.11	91	67-139	0	0-20	
Trichlorofluoromethane	ND	50.00	57.85	116	58.92	118	59-155	2	0-20	
1,2,3-Trichloropropane	ND	50.00	50.92	102	51.46	103	75-127	1	0-20	
1,2,4-Trimethylbenzene	ND	50.00	47.49	95	48.73	97	75-133	3	0-20	
1,3,5-Trimethylbenzene	ND	50.00	49.01	98	49.99	100	75-135	2	0-20	
Vinyl Acetate	ND	50.00	49.27	99	49.76	100	54-180	1	0-25	
Vinyl Chloride	ND	50.00	57.03	114	57.61	115	51-153	1	0-20	
p/m-Xylene	ND	100.0	96.92	97	98.58	99	75-133	2	0-20	
o-Xylene	ND	50.00	49.89	100	51.09	102	75-134	2	0-20	
Methyl-t-Butyl Ether (MTBE)	ND	50.00	51.21	102	51.60	103	64-136	1	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 12/20/16
Work Order: 16-12-2002
Preparation: EPA 5030C
Method: EPA 8260B

Project: Building 684 - Raytheon Task No. 764.10

Page 8 of 11

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
AB-05	Sample	Aqueous	GC/MS XX	12/22/16	12/22/16 11:19	161222S003
AB-05	Matrix Spike	Aqueous	GC/MS XX	12/22/16	12/22/16 11:47	161222S003
AB-05	Matrix Spike Duplicate	Aqueous	GC/MS XX	12/22/16	12/22/16 12:14	161222S003

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Acetone	ND	50.00	42.35	85	45.54	91	34-166	7	0-33	
Benzene	ND	50.00	43.91	88	46.35	93	75-125	5	0-20	
Bromobenzene	ND	50.00	47.06	94	48.37	97	75-125	3	0-20	
Bromochloromethane	ND	50.00	44.29	89	45.55	91	75-125	3	0-20	
Bromodichloromethane	ND	50.00	49.76	100	53.07	106	75-134	6	0-20	
Bromoform	ND	50.00	51.27	103	53.47	107	74-134	4	0-20	
Bromomethane	ND	50.00	33.05	66	30.77	62	20-168	7	0-40	
2-Butanone	ND	50.00	44.83	90	44.12	88	37-157	2	0-20	
n-Butylbenzene	ND	50.00	49.67	99	52.17	104	73-145	5	0-20	
sec-Butylbenzene	ND	50.00	49.13	98	51.20	102	75-135	4	0-20	
tert-Butylbenzene	ND	50.00	49.18	98	51.73	103	75-136	5	0-20	
Carbon Disulfide	ND	50.00	36.06	72	39.41	79	50-152	9	0-27	
Carbon Tetrachloride	ND	50.00	50.70	101	56.10	112	70-154	10	0-20	
Chlorobenzene	ND	50.00	45.30	91	46.92	94	75-125	4	0-20	
Chloroethane	ND	50.00	66.70	133	66.86	134	41-167	0	0-26	
Chloroform	ND	50.00	43.93	88	46.41	93	75-127	5	0-20	
Chloromethane	ND	50.00	39.96	80	38.30	77	41-149	4	0-20	
2-Chlorotoluene	ND	50.00	46.77	94	48.90	98	75-128	4	0-20	
4-Chlorotoluene	ND	50.00	47.24	94	48.90	98	75-125	3	0-20	
Dibromochloromethane	ND	50.00	44.98	90	47.17	94	75-131	5	0-20	
1,2-Dibromo-3-Chloropropane	ND	50.00	49.59	99	51.85	104	64-142	4	0-20	
1,2-Dibromoethane	ND	50.00	45.98	92	46.95	94	75-129	2	0-20	
Dibromomethane	ND	50.00	43.86	88	45.50	91	75-125	4	0-20	
1,2-Dichlorobenzene	ND	50.00	48.01	96	48.90	98	75-125	2	0-20	
1,3-Dichlorobenzene	ND	50.00	46.58	93	48.27	97	75-125	4	0-20	
1,4-Dichlorobenzene	ND	50.00	45.80	92	47.32	95	75-125	3	0-20	
Dichlorodifluoromethane	ND	50.00	51.60	103	49.29	99	25-157	5	0-26	
1,1-Dichloroethane	ND	50.00	43.70	87	46.23	92	73-139	6	0-20	
1,2-Dichloroethane	ND	50.00	45.04	90	46.68	93	75-125	4	0-20	
1,1-Dichloroethene	ND	50.00	41.20	82	43.30	87	61-145	5	0-20	
c-1,2-Dichloroethene	ND	50.00	43.42	87	45.60	91	75-125	5	0-20	
t-1,2-Dichloroethene	ND	50.00	40.05	80	43.07	86	64-142	7	0-20	
1,2-Dichloropropane	ND	50.00	45.51	91	47.77	96	75-127	5	0-20	
1,3-Dichloropropane	ND	50.00	46.37	93	47.19	94	75-125	2	0-20	
2,2-Dichloropropane	ND	50.00	55.83	112	61.15	122	24-180	9	0-20	

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 12/20/16
Work Order: 16-12-2002
Preparation: EPA 5030C
Method: EPA 8260B

Project: Building 684 - Raytheon Task No. 764.10

Page 9 of 11

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
1,1-Dichloropropene	ND	50.00	42.70	85	45.20	90	75-135	6	0-20	
c-1,3-Dichloropropene	ND	50.00	46.28	93	49.35	99	75-137	6	0-20	
t-1,3-Dichloropropene	ND	50.00	49.98	100	52.48	105	74-146	5	0-20	
Ethylbenzene	ND	50.00	45.93	92	48.05	96	75-129	5	0-20	
2-Hexanone	ND	50.00	48.50	97	50.77	102	47-161	5	0-20	
Isopropylbenzene	ND	50.00	47.77	96	50.19	100	75-135	5	0-20	
p-Isopropyltoluene	ND	50.00	48.87	98	50.91	102	75-136	4	0-20	
Methylene Chloride	ND	50.00	41.70	83	43.50	87	63-141	4	0-20	
4-Methyl-2-Pentanone	ND	50.00	46.96	94	50.24	100	66-138	7	0-20	
Naphthalene	ND	50.00	48.20	96	50.58	101	59-143	5	0-20	
n-Propylbenzene	ND	50.00	47.41	95	49.60	99	75-133	5	0-20	
Styrene	ND	50.00	47.48	95	49.17	98	70-142	3	0-28	
1,1,1,2-Tetrachloroethane	ND	50.00	53.04	106	55.36	111	75-139	4	0-20	
1,1,2,2-Tetrachloroethane	ND	50.00	51.36	103	52.98	106	61-145	3	0-20	
Tetrachloroethene	ND	50.00	39.64	79	41.40	83	47-143	4	0-20	
Toluene	ND	50.00	44.33	89	46.86	94	75-125	6	0-20	
1,2,3-Trichlorobenzene	ND	50.00	49.38	99	51.16	102	73-133	4	0-20	
1,2,4-Trichlorobenzene	ND	50.00	48.65	97	50.49	101	71-137	4	0-20	
1,1,1-Trichloroethane	ND	50.00	48.85	98	53.32	107	75-136	9	0-20	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50.00	40.84	82	42.64	85	42-168	4	0-22	
1,1,2-Trichloroethane	ND	50.00	47.10	94	47.53	95	75-125	1	0-20	
Trichloroethene	ND	50.00	41.90	84	44.53	89	67-139	6	0-20	
Trichlorofluoromethane	ND	50.00	58.18	116	56.34	113	59-155	3	0-20	
1,2,3-Trichloropropane	ND	50.00	49.15	98	50.52	101	75-127	3	0-20	
1,2,4-Trimethylbenzene	ND	50.00	46.92	94	48.47	97	75-133	3	0-20	
1,3,5-Trimethylbenzene	ND	50.00	47.01	94	48.61	97	75-135	3	0-20	
Vinyl Acetate	ND	50.00	51.80	104	53.53	107	54-180	3	0-25	
Vinyl Chloride	ND	50.00	53.64	107	51.52	103	51-153	4	0-20	
p/m-Xylene	ND	100.0	91.91	92	95.93	96	75-133	4	0-20	
o-Xylene	ND	50.00	47.24	94	49.08	98	75-134	4	0-20	
Methyl-t-Butyl Ether (MTBE)	ND	50.00	44.96	90	46.23	92	64-136	3	0-20	

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 12/20/16
Work Order: 16-12-2002
Preparation: EPA 5030C
Method: EPA 8260B

Project: Building 684 - Raytheon Task No. 764.10

Page 10 of 11

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
16-12-2116-3	Sample	Aqueous	GC/MS XX	12/23/16	12/23/16 18:18	161223S003
16-12-2116-3	Matrix Spike	Aqueous	GC/MS XX	12/23/16	12/23/16 13:18	161223S003
16-12-2116-3	Matrix Spike Duplicate	Aqueous	GC/MS XX	12/23/16	12/23/16 13:45	161223S003

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Acetone	ND	50.00	68.87	138	107.1	214	34-166	43	0-33	3,4
Benzene	1.155	50.00	50.63	99	50.72	99	75-125	0	0-20	
Bromobenzene	ND	50.00	51.63	103	51.55	103	75-125	0	0-20	
Bromochloromethane	ND	50.00	49.36	99	60.10	120	75-125	20	0-20	
Bromodichloromethane	ND	50.00	56.02	112	57.53	115	75-134	3	0-20	
Bromoform	ND	50.00	63.36	127	61.11	122	74-134	4	0-20	
Bromomethane	ND	50.00	39.57	79	47.97	96	20-168	19	0-40	
2-Butanone	ND	50.00	48.77	98	75.85	152	37-157	43	0-20	4
n-Butylbenzene	12.42	50.00	51.10	77	55.85	87	73-145	9	0-20	
sec-Butylbenzene	13.33	50.00	53.25	80	54.63	83	75-135	3	0-20	
tert-Butylbenzene	ND	50.00	44.50	89	43.21	86	75-136	3	0-20	
Carbon Disulfide	ND	50.00	33.44	67	43.47	87	50-152	26	0-27	
Carbon Tetrachloride	ND	50.00	53.04	106	66.81	134	70-154	23	0-20	4
Chlorobenzene	ND	50.00	49.45	99	47.99	96	75-125	3	0-20	
Chloroethane	ND	50.00	51.07	102	56.99	114	41-167	11	0-26	
Chloroform	ND	50.00	52.60	105	60.02	120	75-127	13	0-20	
Chloromethane	ND	50.00	50.76	102	54.47	109	41-149	7	0-20	
2-Chlorotoluene	ND	50.00	47.27	95	46.80	94	75-128	1	0-20	
4-Chlorotoluene	ND	50.00	49.00	98	47.21	94	75-125	4	0-20	
Dibromochloromethane	ND	50.00	52.12	104	54.38	109	75-131	4	0-20	
1,2-Dibromo-3-Chloropropane	ND	50.00	62.96	126	64.26	129	64-142	2	0-20	
1,2-Dibromoethane	ND	50.00	54.80	110	55.10	110	75-129	1	0-20	
Dibromomethane	ND	50.00	49.64	99	50.82	102	75-125	2	0-20	
1,2-Dichlorobenzene	ND	50.00	52.05	104	50.07	100	75-125	4	0-20	
1,3-Dichlorobenzene	ND	50.00	49.80	100	47.56	95	75-125	5	0-20	
1,4-Dichlorobenzene	ND	50.00	49.49	99	47.51	95	75-125	4	0-20	
Dichlorodifluoromethane	ND	50.00	43.56	87	56.70	113	25-157	26	0-26	
1,1-Dichloroethane	ND	50.00	33.87	68	55.79	112	73-139	49	0-20	3,4
1,2-Dichloroethane	ND	50.00	51.50	103	50.48	101	75-125	2	0-20	
1,1-Dichloroethene	ND	50.00	38.87	78	49.42	99	61-145	24	0-20	4
c-1,2-Dichloroethene	ND	50.00	44.33	89	59.85	120	75-125	30	0-20	4
t-1,2-Dichloroethene	ND	50.00	43.31	87	57.50	115	64-142	28	0-20	4
1,2-Dichloropropane	ND	50.00	52.98	106	52.69	105	75-127	1	0-20	
1,3-Dichloropropane	ND	50.00	54.33	109	55.70	111	75-125	2	0-20	
2,2-Dichloropropane	ND	50.00	71.88	144	81.21	162	24-180	12	0-20	

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 12/20/16
Work Order: 16-12-2002
Preparation: EPA 5030C
Method: EPA 8260B

Project: Building 684 - Raytheon Task No. 764.10

Page 11 of 11

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
1,1-Dichloropropene	ND	50.00	47.39	95	55.96	112	75-135	17	0-20	
c-1,3-Dichloropropene	ND	50.00	55.33	111	57.01	114	75-137	3	0-20	
t-1,3-Dichloropropene	ND	50.00	61.34	123	63.96	128	74-146	4	0-20	
Ethylbenzene	1.101	50.00	47.57	93	46.25	90	75-129	3	0-20	
2-Hexanone	ND	50.00	58.60	117	60.13	120	47-161	3	0-20	
Isopropylbenzene	30.62	50.00	71.54	82	73.33	85	75-135	2	0-20	
p-Isopropyltoluene	ND	50.00	42.93	86	45.38	91	75-136	6	0-20	
Methylene Chloride	ND	50.00	45.98	92	56.65	113	63-141	21	0-20	4
4-Methyl-2-Pentanone	ND	50.00	58.66	117	55.55	111	66-138	5	0-20	
Naphthalene	11.08	50.00	70.82	119	77.69	133	59-143	9	0-20	
n-Propylbenzene	29.44	50.00	67.95	77	74.34	90	75-133	9	0-20	
Styrene	ND	50.00	51.01	102	50.93	102	70-142	0	0-28	
1,1,1,2-Tetrachloroethane	ND	50.00	60.19	120	58.52	117	75-139	3	0-20	
1,1,2,2-Tetrachloroethane	ND	50.00	49.78	100	44.52	89	61-145	11	0-20	
Tetrachloroethene	ND	50.00	61.68	123	60.90	122	47-143	1	0-20	
Toluene	ND	50.00	47.09	94	42.88	86	75-125	9	0-20	
1,2,3-Trichlorobenzene	ND	50.00	52.04	104	54.77	110	73-133	5	0-20	
1,2,4-Trichlorobenzene	ND	50.00	53.15	106	54.83	110	71-137	3	0-20	
1,1,1-Trichloroethane	ND	50.00	55.81	112	68.56	137	75-136	21	0-20	3,4
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50.00	33.20	66	47.55	95	42-168	36	0-22	4
1,1,2-Trichloroethane	ND	50.00	56.29	113	57.99	116	75-125	3	0-20	
Trichloroethene	ND	50.00	55.15	110	55.62	111	67-139	1	0-20	
Trichlorofluoromethane	ND	50.00	52.68	105	64.79	130	59-155	21	0-20	4
1,2,3-Trichloropropane	ND	50.00	57.73	115	58.67	117	75-127	2	0-20	
1,2,4-Trimethylbenzene	ND	50.00	46.35	93	47.34	95	75-133	2	0-20	
1,3,5-Trimethylbenzene	ND	50.00	41.28	83	46.15	92	75-135	11	0-20	
Vinyl Acetate	ND	50.00	39.83	80	70.86	142	54-180	56	0-25	4
Vinyl Chloride	ND	50.00	60.24	120	66.06	132	51-153	9	0-20	
p/m-Xylene	1.348	100.0	91.54	90	91.76	90	75-133	0	0-20	
o-Xylene	ND	50.00	48.51	97	48.21	96	75-134	1	0-20	
Methyl-t-Butyl Ether (MTBE)	3.761	50.00	54.85	102	69.88	132	64-136	24	0-20	4

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 3510C
 Method: EPA 8270C (M) Isotope Dilution

Project: Building 684 - Raytheon Task No. 764.10

Page 1 of 9

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-16-216-918	LCS	Aqueous	GC/MS DDD	12/21/16	12/21/16 21:48	161221L12
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
1,4-Dioxane		20.00	20.23	101	50-130	

Quality Control - LCS

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B

Project: Building 684 - Raytheon Task No. 764.10

Page 2 of 9

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number	
099-14-001-22149	LCS	Aqueous	GC/MS XX	12/21/16	12/21/16 09:17	161221L004	
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>ME CL</u>	<u>Qualifiers</u>
Acetone		50.00	47.56	95	53-137	39-151	
Benzene		50.00	47.83	96	79-121	72-128	
Bromobenzene		50.00	48.91	98	80-120	73-127	
Bromochloromethane		50.00	48.68	97	80-122	73-129	
Bromodichloromethane		50.00	55.16	110	80-124	73-131	
Bromoform		50.00	54.12	108	73-127	64-136	
Bromomethane		50.00	38.14	76	50-150	33-167	
2-Butanone		50.00	47.57	95	60-126	49-137	
n-Butylbenzene		50.00	50.90	102	72-138	61-149	
sec-Butylbenzene		50.00	50.59	101	77-131	68-140	
tert-Butylbenzene		50.00	50.64	101	80-125	72-132	
Carbon Disulfide		50.00	41.51	83	50-150	33-167	
Carbon Tetrachloride		50.00	54.79	110	65-143	52-156	
Chlorobenzene		50.00	47.22	94	80-120	73-127	
Chloroethane		50.00	53.29	107	62-128	51-139	
Chloroform		50.00	48.00	96	80-120	73-127	
Chloromethane		50.00	43.02	86	43-133	28-148	
2-Chlorotoluene		50.00	47.67	95	80-121	73-128	
4-Chlorotoluene		50.00	48.49	97	80-120	73-127	
Dibromochloromethane		50.00	48.52	97	80-123	73-130	
1,2-Dibromo-3-Chloropropane		50.00	51.97	104	66-126	56-136	
1,2-Dibromoethane		50.00	47.56	95	80-120	73-127	
Dibromomethane		50.00	48.24	96	80-120	73-127	
1,2-Dichlorobenzene		50.00	48.78	98	80-120	73-127	
1,3-Dichlorobenzene		50.00	48.30	97	80-120	73-127	
1,4-Dichlorobenzene		50.00	47.34	95	80-120	73-127	
Dichlorodifluoromethane		50.00	51.85	104	50-150	33-167	
1,1-Dichloroethane		50.00	48.65	97	72-126	63-135	
1,2-Dichloroethane		50.00	48.95	98	76-120	69-127	
1,1-Dichloroethene		50.00	45.52	91	66-132	55-143	
c-1,2-Dichloroethene		50.00	47.73	95	78-120	71-127	
t-1,2-Dichloroethene		50.00	45.55	91	66-132	55-143	
1,2-Dichloropropane		50.00	49.63	99	80-120	73-127	
1,3-Dichloropropane		50.00	48.24	96	80-120	73-127	
2,2-Dichloropropane		50.00	57.57	115	50-150	33-167	
1,1-Dichloropropene		50.00	46.86	94	75-123	67-131	
c-1,3-Dichloropropene		50.00	51.96	104	77-131	68-140	
t-1,3-Dichloropropene		50.00	52.44	105	76-136	66-146	

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B

Project: Building 684 - Raytheon Task No. 764.10

Page 3 of 9

<u>Parameter</u>	<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>ME CL</u>	<u>Qualifiers</u>
Ethylbenzene	50.00	47.93	96	80-120	73-127	
2-Hexanone	50.00	50.23	100	63-123	53-133	
Isopropylbenzene	50.00	49.92	100	80-128	72-136	
p-Isopropyltoluene	50.00	50.45	101	73-133	63-143	
Methylene Chloride	50.00	46.10	92	61-133	49-145	
4-Methyl-2-Pentanone	50.00	50.46	101	65-125	55-135	
Naphthalene	50.00	50.52	101	69-129	59-139	
n-Propylbenzene	50.00	48.84	98	80-128	72-136	
Styrene	50.00	49.54	99	80-126	72-134	
1,1,1,2-Tetrachloroethane	50.00	54.83	110	80-129	72-137	
1,1,2,2-Tetrachloroethane	50.00	51.11	102	74-122	66-130	
Tetrachloroethene	50.00	46.10	92	55-139	41-153	
Toluene	50.00	48.60	97	80-120	73-127	
1,2,3-Trichlorobenzene	50.00	51.08	102	72-132	62-142	
1,2,4-Trichlorobenzene	50.00	50.57	101	74-134	64-144	
1,1,1-Trichloroethane	50.00	54.00	108	76-124	68-132	
1,1,2-Trichloro-1,2,2-Trifluoroethane	50.00	46.22	92	54-150	38-166	
1,1,2-Trichloroethane	50.00	48.26	97	80-120	73-127	
Trichloroethene	50.00	47.34	95	79-121	72-128	
Trichlorofluoromethane	50.00	57.23	114	72-132	62-142	
1,2,3-Trichloropropane	50.00	51.33	103	75-123	67-131	
1,2,4-Trimethylbenzene	50.00	48.69	97	74-128	65-137	
1,3,5-Trimethylbenzene	50.00	48.81	98	77-131	68-140	
Vinyl Acetate	50.00	54.80	110	50-150	33-167	
Vinyl Chloride	50.00	52.36	105	63-129	52-140	
p/m-Xylene	100.0	96.18	96	80-122	73-129	
o-Xylene	50.00	49.60	99	80-128	72-136	
Methyl-t-Butyl Ether (MTBE)	50.00	48.20	96	69-123	60-132	

Total number of LCS compounds: 66

Total number of ME compounds: 0

Total number of ME compounds allowed: 3

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 12/20/16
Work Order: 16-12-2002
Preparation: EPA 5030C
Method: EPA 8260B

Project: Building 684 - Raytheon Task No. 764.10

Page 4 of 9

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number	
099-14-001-22159	LCS	Aqueous	GC/MS XX	12/21/16	12/21/16 22:00	161221L045	
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>ME CL</u>	<u>Qualifiers</u>
Acetone		50.00	52.82	106	53-137	39-151	
Benzene		50.00	50.48	101	79-121	72-128	
Bromobenzene		50.00	51.63	103	80-120	73-127	
Bromochloromethane		50.00	53.02	106	80-122	73-129	
Bromodichloromethane		50.00	58.28	117	80-124	73-131	
Bromoform		50.00	53.95	108	73-127	64-136	
Bromomethane		50.00	30.48	61	50-150	33-167	
2-Butanone		50.00	48.68	97	60-126	49-137	
n-Butylbenzene		50.00	49.98	100	72-138	61-149	
sec-Butylbenzene		50.00	50.12	100	77-131	68-140	
tert-Butylbenzene		50.00	51.31	103	80-125	72-132	
Carbon Disulfide		50.00	42.39	85	50-150	33-167	
Carbon Tetrachloride		50.00	54.25	109	65-143	52-156	
Chlorobenzene		50.00	49.80	100	80-120	73-127	
Chloroethane		50.00	61.16	122	62-128	51-139	
Chloroform		50.00	52.16	104	80-120	73-127	
Chloromethane		50.00	38.65	77	43-133	28-148	
2-Chlorotoluene		50.00	51.05	102	80-121	73-128	
4-Chlorotoluene		50.00	49.66	99	80-120	73-127	
Dibromochloromethane		50.00	50.64	101	80-123	73-130	
1,2-Dibromo-3-Chloropropane		50.00	50.21	100	66-126	56-136	
1,2-Dibromoethane		50.00	50.52	101	80-120	73-127	
Dibromomethane		50.00	50.64	101	80-120	73-127	
1,2-Dichlorobenzene		50.00	50.80	102	80-120	73-127	
1,3-Dichlorobenzene		50.00	49.34	99	80-120	73-127	
1,4-Dichlorobenzene		50.00	48.51	97	80-120	73-127	
Dichlorodifluoromethane		50.00	44.51	89	50-150	33-167	
1,1-Dichloroethane		50.00	51.25	103	72-126	63-135	
1,2-Dichloroethane		50.00	51.93	104	76-120	69-127	
1,1-Dichloroethene		50.00	46.25	92	66-132	55-143	
c-1,2-Dichloroethene		50.00	51.23	102	78-120	71-127	
t-1,2-Dichloroethene		50.00	47.94	96	66-132	55-143	
1,2-Dichloropropane		50.00	53.03	106	80-120	73-127	
1,3-Dichloropropane		50.00	51.16	102	80-120	73-127	
2,2-Dichloropropane		50.00	46.35	93	50-150	33-167	
1,1-Dichloropropene		50.00	48.09	96	75-123	67-131	
c-1,3-Dichloropropene		50.00	52.33	105	77-131	68-140	
t-1,3-Dichloropropene		50.00	52.43	105	76-136	66-146	

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B

Project: Building 684 - Raytheon Task No. 764.10

Page 5 of 9

<u>Parameter</u>	<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>ME CL</u>	<u>Qualifiers</u>
Ethylbenzene	50.00	50.18	100	80-120	73-127	
2-Hexanone	50.00	49.59	99	63-123	53-133	
Isopropylbenzene	50.00	51.55	103	80-128	72-136	
p-Isopropyltoluene	50.00	50.01	100	73-133	63-143	
Methylene Chloride	50.00	50.93	102	61-133	49-145	
4-Methyl-2-Pentanone	50.00	50.96	102	65-125	55-135	
Naphthalene	50.00	50.67	101	69-129	59-139	
n-Propylbenzene	50.00	51.18	102	80-128	72-136	
Styrene	50.00	52.81	106	80-126	72-134	
1,1,1,2-Tetrachloroethane	50.00	57.60	115	80-129	72-137	
1,1,2,2-Tetrachloroethane	50.00	52.03	104	74-122	66-130	
Tetrachloroethene	50.00	46.16	92	55-139	41-153	
Toluene	50.00	50.88	102	80-120	73-127	
1,2,3-Trichlorobenzene	50.00	51.91	104	72-132	62-142	
1,2,4-Trichlorobenzene	50.00	51.05	102	74-134	64-144	
1,1,1-Trichloroethane	50.00	54.68	109	76-124	68-132	
1,1,2-Trichloro-1,2,2-Trifluoroethane	50.00	40.54	81	54-150	38-166	
1,1,2-Trichloroethane	50.00	51.52	103	80-120	73-127	
Trichloroethene	50.00	47.98	96	79-121	72-128	
Trichlorofluoromethane	50.00	52.77	106	72-132	62-142	
1,2,3-Trichloropropane	50.00	52.20	104	75-123	67-131	
1,2,4-Trimethylbenzene	50.00	49.83	100	74-128	65-137	
1,3,5-Trimethylbenzene	50.00	51.61	103	77-131	68-140	
Vinyl Acetate	50.00	60.10	120	50-150	33-167	
Vinyl Chloride	50.00	49.10	98	63-129	52-140	
p/m-Xylene	100.0	100.7	101	80-122	73-129	
o-Xylene	50.00	52.23	104	80-128	72-136	
Methyl-t-Butyl Ether (MTBE)	50.00	52.14	104	69-123	60-132	

Total number of LCS compounds: 66

Total number of ME compounds: 0

Total number of ME compounds allowed: 3

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 12/20/16
Work Order: 16-12-2002
Preparation: EPA 5030C
Method: EPA 8260B

Project: Building 684 - Raytheon Task No. 764.10

Page 6 of 9

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number	
099-14-001-22160	LCS	Aqueous	GC/MS XX	12/22/16	12/22/16 09:30	161222L005	
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>ME CL</u>	<u>Qualifiers</u>
Acetone		50.00	44.34	89	53-137	39-151	
Benzene		50.00	44.99	90	79-121	72-128	
Bromobenzene		50.00	47.43	95	80-120	73-127	
Bromochloromethane		50.00	45.68	91	80-122	73-129	
Bromodichloromethane		50.00	51.87	104	80-124	73-131	
Bromoform		50.00	54.23	108	73-127	64-136	
Bromomethane		50.00	31.67	63	50-150	33-167	
2-Butanone		50.00	46.82	94	60-126	49-137	
n-Butylbenzene		50.00	49.64	99	72-138	61-149	
sec-Butylbenzene		50.00	48.80	98	77-131	68-140	
tert-Butylbenzene		50.00	48.70	97	80-125	72-132	
Carbon Disulfide		50.00	35.99	72	50-150	33-167	
Carbon Tetrachloride		50.00	53.13	106	65-143	52-156	
Chlorobenzene		50.00	45.76	92	80-120	73-127	
Chloroethane		50.00	49.39	99	62-128	51-139	
Chloroform		50.00	45.11	90	80-120	73-127	
Chloromethane		50.00	34.36	69	43-133	28-148	
2-Chlorotoluene		50.00	47.45	95	80-121	73-128	
4-Chlorotoluene		50.00	47.83	96	80-120	73-127	
Dibromochloromethane		50.00	47.63	95	80-123	73-130	
1,2-Dibromo-3-Chloropropane		50.00	53.28	107	66-126	56-136	
1,2-Dibromoethane		50.00	47.73	95	80-120	73-127	
Dibromomethane		50.00	45.64	91	80-120	73-127	
1,2-Dichlorobenzene		50.00	48.49	97	80-120	73-127	
1,3-Dichlorobenzene		50.00	46.84	94	80-120	73-127	
1,4-Dichlorobenzene		50.00	46.94	94	80-120	73-127	
Dichlorodifluoromethane		50.00	43.07	86	50-150	33-167	
1,1-Dichloroethane		50.00	44.81	90	72-126	63-135	
1,2-Dichloroethane		50.00	46.25	93	76-120	69-127	
1,1-Dichloroethene		50.00	39.81	80	66-132	55-143	
c-1,2-Dichloroethene		50.00	44.50	89	78-120	71-127	
t-1,2-Dichloroethene		50.00	40.60	81	66-132	55-143	
1,2-Dichloropropane		50.00	46.67	93	80-120	73-127	
1,3-Dichloropropane		50.00	47.16	94	80-120	73-127	
2,2-Dichloropropane		50.00	61.46	123	50-150	33-167	
1,1-Dichloropropene		50.00	43.00	86	75-123	67-131	
c-1,3-Dichloropropene		50.00	50.80	102	77-131	68-140	
t-1,3-Dichloropropene		50.00	54.73	109	76-136	66-146	

RPD: Relative Percent Difference. CL: Control Limits

Quality Control - LCS

Hargis + Associates, Inc.
 9171 Towne Centre Drive, Suite 375
 San Diego, CA 92122-6215

Date Received: 12/20/16
 Work Order: 16-12-2002
 Preparation: EPA 5030C
 Method: EPA 8260B

Project: Building 684 - Raytheon Task No. 764.10

Page 7 of 9

<u>Parameter</u>	<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>ME CL</u>	<u>Qualifiers</u>
Ethylbenzene	50.00	46.60	93	80-120	73-127	
2-Hexanone	50.00	48.46	97	63-123	53-133	
Isopropylbenzene	50.00	48.10	96	80-128	72-136	
p-Isopropyltoluene	50.00	48.73	97	73-133	63-143	
Methylene Chloride	50.00	41.97	84	61-133	49-145	
4-Methyl-2-Pentanone	50.00	47.74	95	65-125	55-135	
Naphthalene	50.00	50.00	100	69-129	59-139	
n-Propylbenzene	50.00	47.99	96	80-128	72-136	
Styrene	50.00	48.38	97	80-126	72-134	
1,1,1,2-Tetrachloroethane	50.00	55.22	110	80-129	72-137	
1,1,2,2-Tetrachloroethane	50.00	51.31	103	74-122	66-130	
Tetrachloroethene	50.00	43.13	86	55-139	41-153	
Toluene	50.00	45.37	91	80-120	73-127	
1,2,3-Trichlorobenzene	50.00	50.54	101	72-132	62-142	
1,2,4-Trichlorobenzene	50.00	49.40	99	74-134	64-144	
1,1,1-Trichloroethane	50.00	51.72	103	76-124	68-132	
1,1,2-Trichloro-1,2,2-Trifluoroethane	50.00	37.61	75	54-150	38-166	
1,1,2-Trichloroethane	50.00	47.96	96	80-120	73-127	
Trichloroethene	50.00	43.54	87	79-121	72-128	
Trichlorofluoromethane	50.00	49.77	100	72-132	62-142	
1,2,3-Trichloropropane	50.00	52.34	105	75-123	67-131	
1,2,4-Trimethylbenzene	50.00	47.48	95	74-128	65-137	
1,3,5-Trimethylbenzene	50.00	47.67	95	77-131	68-140	
Vinyl Acetate	50.00	54.10	108	50-150	33-167	
Vinyl Chloride	50.00	45.53	91	63-129	52-140	
p/m-Xylene	100.0	93.75	94	80-122	73-129	
o-Xylene	50.00	48.03	96	80-128	72-136	
Methyl-t-Butyl Ether (MTBE)	50.00	46.14	92	69-123	60-132	

Total number of LCS compounds: 66

Total number of ME compounds: 0

Total number of ME compounds allowed: 3

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 12/20/16
Work Order: 16-12-2002
Preparation: EPA 5030C
Method: EPA 8260B

Project: Building 684 - Raytheon Task No. 764.10

Page 8 of 9

Quality Control Sample ID	Type	Matrix		Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-14-001-22174	LCS	Aqueous		GC/MS XX	12/23/16	12/23/16 10:34	161223L004			
099-14-001-22174	LCSD	Aqueous		GC/MS XX	12/23/16	12/23/16 18:45	161223L004			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
Acetone	50.00	44.34	89	45.83	92	53-137	39-151	3	0-21	
Benzene	50.00	43.94	88	41.71	83	79-121	72-128	5	0-20	
Bromobenzene	50.00	47.12	94	45.16	90	80-120	73-127	4	0-20	
Bromochloromethane	50.00	44.24	88	42.73	85	80-122	73-129	3	0-20	
Bromodichloromethane	50.00	51.38	103	47.60	95	80-124	73-131	8	0-20	
Bromoform	50.00	54.90	110	48.17	96	73-127	64-136	13	0-20	
Bromomethane	50.00	33.83	68	39.88	80	50-150	33-167	16	0-26	
2-Butanone	50.00	44.15	88	43.00	86	60-126	49-137	3	0-20	
n-Butylbenzene	50.00	48.13	96	44.36	89	72-138	61-149	8	0-20	
sec-Butylbenzene	50.00	47.89	96	44.88	90	77-131	68-140	6	0-20	
tert-Butylbenzene	50.00	48.12	96	45.05	90	80-125	72-132	7	0-20	
Carbon Disulfide	50.00	33.57	67	29.12	58	50-150	33-167	14	0-22	
Carbon Tetrachloride	50.00	53.42	107	46.15	92	65-143	52-156	15	0-20	
Chlorobenzene	50.00	45.27	91	43.22	86	80-120	73-127	5	0-20	
Chloroethane	50.00	46.05	92	45.62	91	62-128	51-139	1	0-20	
Chloroform	50.00	44.41	89	41.99	84	80-120	73-127	6	0-20	
Chloromethane	50.00	38.74	77	37.75	76	43-133	28-148	3	0-20	
2-Chlorotoluene	50.00	46.38	93	44.53	89	80-121	73-128	4	0-20	
4-Chlorotoluene	50.00	46.42	93	44.06	88	80-120	73-127	5	0-20	
Dibromochloromethane	50.00	47.65	95	42.70	85	80-123	73-130	11	0-20	
1,2-Dibromo-3-Chloropropane	50.00	51.93	104	47.91	96	66-126	56-136	8	0-20	
1,2-Dibromoethane	50.00	46.72	93	44.79	90	80-120	73-127	4	0-20	
Dibromomethane	50.00	44.74	89	42.45	85	80-120	73-127	5	0-20	
1,2-Dichlorobenzene	50.00	47.58	95	45.81	92	80-120	73-127	4	0-20	
1,3-Dichlorobenzene	50.00	46.41	93	43.90	88	80-120	73-127	6	0-20	
1,4-Dichlorobenzene	50.00	46.01	92	43.43	87	80-120	73-127	6	0-20	
Dichlorodifluoromethane	50.00	44.28	89	41.00	82	50-150	33-167	8	0-30	
1,1-Dichloroethane	50.00	37.12	74	41.34	83	72-126	63-135	11	0-20	
1,2-Dichloroethane	50.00	45.12	90	42.77	86	76-120	69-127	5	0-20	
1,1-Dichloroethene	50.00	38.73	77	36.07	72	66-132	55-143	7	0-20	
c-1,2-Dichloroethene	50.00	43.36	87	41.55	83	78-120	71-127	4	0-20	
t-1,2-Dichloroethene	50.00	43.86	88	37.13	74	66-132	55-143	17	0-20	
1,2-Dichloropropane	50.00	46.10	92	44.27	89	80-120	73-127	4	0-20	
1,3-Dichloropropane	50.00	46.72	93	44.86	90	80-120	73-127	4	0-20	
2,2-Dichloropropane	50.00	61.59	123	45.91	92	50-150	33-167	29	0-20	X
1,1-Dichloropropene	50.00	41.42	83	38.04	76	75-123	67-131	8	0-20	

RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

Hargis + Associates, Inc.
9171 Towne Centre Drive, Suite 375
San Diego, CA 92122-6215

Date Received: 12/20/16
Work Order: 16-12-2002
Preparation: EPA 5030C
Method: EPA 8260B

Project: Building 684 - Raytheon Task No. 764.10

Page 9 of 9

Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	ME CL	RPD	RPD CL	Qualifiers
c-1,3-Dichloropropene	50.00	50.22	100	44.89	90	77-131	68-140	11	0-20	
t-1,3-Dichloropropene	50.00	53.94	108	47.57	95	76-136	66-146	13	0-20	
Ethylbenzene	50.00	45.32	91	42.89	86	80-120	73-127	6	0-20	
2-Hexanone	50.00	47.03	94	45.78	92	63-123	53-133	3	0-20	
Isopropylbenzene	50.00	47.14	94	44.91	90	80-128	72-136	5	0-20	
p-Isopropyltoluene	50.00	47.75	96	44.67	89	73-133	63-143	7	0-20	
Methylene Chloride	50.00	45.91	92	40.97	82	61-133	49-145	11	0-27	
4-Methyl-2-Pentanone	50.00	47.42	95	45.45	91	65-125	55-135	4	0-20	
Naphthalene	50.00	47.72	95	45.75	92	69-129	59-139	4	0-20	
n-Propylbenzene	50.00	46.79	94	43.90	88	80-128	72-136	6	0-20	
Styrene	50.00	47.35	95	45.37	91	80-126	72-134	4	0-20	
1,1,1,2-Tetrachloroethane	50.00	55.99	112	51.05	102	80-129	72-137	9	0-20	
1,1,2,2-Tetrachloroethane	50.00	49.79	100	44.88	90	74-122	66-130	10	0-20	
Tetrachloroethene	50.00	42.53	85	45.36	91	55-139	41-153	6	0-23	
Toluene	50.00	44.25	89	41.89	84	80-120	73-127	5	0-20	
1,2,3-Trichlorobenzene	50.00	48.89	98	46.33	93	72-132	62-142	5	0-20	
1,2,4-Trichlorobenzene	50.00	48.44	97	45.68	91	74-134	64-144	6	0-20	
1,1,1-Trichloroethane	50.00	50.85	102	46.19	92	76-124	68-132	10	0-20	
1,1,2-Trichloro-1,2,2-Trifluoroethane	50.00	39.67	79	34.61	69	54-150	38-166	14	0-30	
1,1,2-Trichloroethane	50.00	47.78	96	45.57	91	80-120	73-127	5	0-20	
Trichloroethene	50.00	42.89	86	41.54	83	79-121	72-128	3	0-20	
Trichlorofluoromethane	50.00	50.68	101	47.09	94	72-132	62-142	7	0-20	
1,2,3-Trichloropropane	50.00	51.41	103	47.45	95	75-123	67-131	8	0-20	
1,2,4-Trimethylbenzene	50.00	46.23	92	44.17	88	74-128	65-137	5	0-20	
1,3,5-Trimethylbenzene	50.00	46.51	93	44.23	88	77-131	68-140	5	0-20	
Vinyl Acetate	50.00	45.19	90	47.98	96	50-150	33-167	6	0-20	
Vinyl Chloride	50.00	47.96	96	47.81	96	63-129	52-140	0	0-20	
p/m-Xylene	100.0	91.08	91	86.26	86	80-122	73-129	5	0-20	
o-Xylene	50.00	46.99	94	45.00	90	80-128	72-136	4	0-20	
Methyl-t-Butyl Ether (MTBE)	50.00	50.36	101	45.62	91	69-123	60-132	10	0-20	

Total number of LCS compounds: 66

Total number of ME compounds: 0

Total number of ME compounds allowed: 3

LCS ME CL validation result: Pass

RPD: Relative Percent Difference. CL: Control Limits

Sample Analysis Summary Report

Work Order: 16-12-2002

Page 1 of 1

<u>Method</u>	<u>Extraction</u>	<u>Chemist ID</u>	<u>Instrument</u>	<u>Analytical Location</u>
EPA 8260B	EPA 5030C	1042	GC/MS XX	2
EPA 8270C (M) Isotope Dilution	EPA 3510C	928	GC/MS DDD	1


Return to Contents

Location 1: 7440 Lincoln Way, Garden Grove, CA 92841

Location 2: 7445 Lampson Avenue, Garden Grove, CA 92841

Glossary of Terms and Qualifiers

Work Order: 16-12-2002

Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

Revised COC received from Tyler Evans (Hargis) on 01/03/17 at 15:38pm - Virendra (ECI)

Date: 12/20/16
Page 2 of 5

PROJECT: Building 684 - Raytheon

TASK NO.: 764.10

Project Manager Ken Puentes
QA Manager _____
Phone 858-455-6500

Project BCI Fullerton 764.10	Sampled By: TJE/AMD	SAMPLE COLLECTION		Groundwater	Lab prepared water	Hydrochloric Acid (HCl)	Ice	40-ml VOA	1 L Amber	VOCs by EPA 8260B	1,4-Dioxane by 8270 SIM	ESTIMATED CONCENTRATION			Standard TAT	MS/MSD Requested	REMARKS
		Date	Time									0-10	10-100	100-1,000			
	UB-02	12/20/16	1015	X	X	X	X	X	X	X	X	X	X	X	X		
	AB-05		1030	X	X	X	X	X	X	X	X	X	X	X	X		
	UA-13D		1040	X	X	X	X	X	X	X	X	X	X	X	X		REPORT "J" FLAGS
	UA-13000		1045	X	X	X	X	X	X	X	X	X	X	X	X		
	HEU-05		1130	X	X	X	X	X	X	X	X	X	X	X	X		LOG CODE: HARG
	↓		1136	X	X	X	X	X	X	X	X	X	X	X	X		Geotracker ID:
	S-29		1210	X	X	X	X	X	X	X	X	X	X	X	X		T0605900143
	UA-12		1220	X	X	X	X	X	X	X	X	X	X	X	X		
	UA-12D		1225	X	X	X	X	X	X	X	X	X	X	X	X		
	UB-05		1245	X	X	X	X	X	X	X	X	X	X	X	X		
	AB-07		1255	X	X	X	X	X	X	X	X	X	X	X	X		
	UA-14D		1305	X	X	X	X	X	X	X	X	X	X	X	X		
	PHS-122016C		1315	X	X	X	X	X	X	X	X	X	X	X	X		
	S-30		1330	X	X	X	X	X	X	X	X	X	X	X	X		
	UA-11D		1345	X	X	X	X	X	X	X	X	X	X	X	X		
	UA-11		1355	X	X	X	X	X	X	X	X	X	X	X	X		
	UB-03		1405	X	X	X	X	X	X	X	X	X	X	X	X		
	S-31		1420	X	X	X	X	X	X	X	X	X	X	X	X		

Total number of containers per analysis: 57 Total No. of Containers: 57

Relinquished By: / Company:	Date / Time	Received By: / Company	Date / Time
<i>and Dally, H+A</i>	12/20/16 16:40	<i>RM/V ECI</i>	12/20/16 1649
Relinquished By: / Company:	Date / Time	Received By: / Company	Date / Time

- No. of containers correct
- Received in good condition
- Custody seals secure
- Conforms to COC document

Send Results to:
Ken Puentes
9171 Towne Centre Drive
Suite 375
San Diego, CA 92122
Ph: 858-455-6500
kpuentes@hargis.com

Temperature on receipt

16-12-2002

Date: 12/20/16
Page 1 of 3

PROJECT: Building 684 - Raytheon
TASK NO.: 764.10

Project Manager Ken Puentes
QA Manager _____
Phone 858-455-6500

Project BCI Fullerton 764.10	Sampled By: T. Evans/ A. Donnelly	SAMPLE COLLECTION		Groundwater	Lab prepared water	Hydrochloric Acid (HCl)	Ice	40-ml VOA	1 L Amber	VOCs by EPA 8260B	1,4-Dioxane by 8270 SIM	ESTIMATED CONCENTRATION				Standard TAT	MS/MSD Requested	Laboratory AEF Att: Rachelle Arada ECI Virendra Patel		
		Date	Time									0-10	10-100	100-1,000	>1,000				REMARKS	
LAB ID	SAMPLE ID																			
1	TB-122016	12/20/16	700	X	X		X	2		X		X								
2	HEW-04		705	X	X		X	3				X								
3	HEW-01		720	X	X		X	3	1	X								REPORT "J" FLAGS		
4	HEW-0100		725	X	X		X	3	1	X								LOG CODE: HARG		
5	S-18		745	X	X		X	3		X								Geotracker ID:		
6	AB-06		815	X	X		X	3				X						T0605900143		
7	UA-10D		830	X	X		X	3				X					X			
8	UB-04		840	X	X		X	3				X								
9	TB-122016A		850	X	X		X	3				X								
10	AB-08		915	X	X		X	3				X								
11	UA-16D		925	X	X		X	3				X								
12	UA-17D		935	X	X		X	3				X								
13	UA-1700D		940	X	X		X	3				X								
14	UB-06		945	X	X		X	3				X								
15	TB-122016B		955	X	X		X	3				X								
Total number of containers per analysis:								46	3											Total No. of Containers: 49

Relinquished By: / Company:	Date / Time	Received By: / Company	Date / Time
And Donnelly, H+A	12/20/16 16:40	RMM W ECI	12/20/16 1640
Relinquished By: / Company:	Date / Time	Received By: / Company	Date / Time
RMM W ECI	12/20/16 1740	J BCC	1740

- No. of containers correct
- Received in good condition
- Custody seals secure
- Conforms to COC document

Send Results to:
Ken Puentes
9171 Towne Centre Drive
Suite 375
San Diego, CA 92122
Ph: 858-455-6500
kpuentes@hargis.com

Temperature on receipt

2002

Date: 12/20/16
Page 2 of 5

PROJECT: Building 684 - Raytheon

TASK NO.: 764.10

Project Manager Ken Puentes
QA Manager _____
Phone 858-455-6500

Project BCI Fullerton 764.10	Sampled By: TJE/AMD	SAMPLE COLLECTION		Groundwater Lab prepared water Hydrochloric Acid (HCl)	ice	40-ml VOA	1 L Amber	VOCs by EPA 8260B	1,4-Dioxane by 8270 SIM	ESTIMATED CONCENTRATION				Standard TAT	MS/MSD Requested	REMARKS
		Date	Time							0-10	10-100	100-1,000	>1,000			
16	UB-02	12/20/16	1015	X	X	X		X		X			X			
17	AB-05		1030	X	X	X		X		X			X	X		
18	VA-13D		1040	X	X	X		X		X			X		REPORT "J" FLAGS	
19	VA-1300D		1045	X	X	X		X		X			X			
20	HEU-05		1130	X	X	X		X			X		X	X	LOG CODE: HARG	
20	↓		1130	X	X	X		X			X		X		Geotracker ID:	
21	S-29		1210	X	X	X	1	X	X				X		T0605900143	
22	VA-12		1220	X	X	X		X		X			X			
23	VA-12D		1225	X	X	X		X		X			X			
24	UB-05		1245	X	X	X		X		X			X			
25	AB-07		1255	X	X	X		X		X			X			
26	VA-14D		1305	X	X	X		X		X			X			
27	VA-122016C		1315	X	X	X		X		X			X			
28	S-30		1330	X	X	X		X		X			X			
29	VA-11D		1345	X	X	X		X		X			X	X		
30	VA-11		1355	X	X	X		X		X			X			
31	UB-03		1405	X	X	X		X		X			X			
32	S-31		1420	X	X	X		X		X			X			
Total number of containers per analysis:				57	1										Total No. of Containers: 58	

Relinquished By: / Company:	Date / Time	Received By: / Company	Date / Time
<i>Paul Dally, H+A</i>	12/20/16 16:40	<i>RMN/CCI</i>	12/20/16 1640
Relinquished By: / Company:	Date / Time	Received By: / Company	Date / Time
<i>Paul Dally, H+A</i>	12/20/16 1740	<i>RMN/CCI</i>	12/20/16 1740

- No. of containers correct
- Received in good condition
- Custody seals secure
- Conforms to COC document

Temperature on receipt _____

Send Results to:
Ken Puentes
9171 Towne Centre Drive
Suite 375
San Diego, CA 92122
Ph: 858-455-6500
kpuentes@hargis.com

2002

Date: 12/20/16
Page 3 of 3

PROJECT: Building 684 - Raytheon

TASK NO.: 764.10

Project Manager Ken Puentes
QA Manager _____
Phone 858-455-6500

Project BCI Fullerton 764.10	Sampled By: TJE/AMD	SAMPLE COLLECTION		Groundwater	Lab prepared water	Hydrochloric Acid (HCl)	Ice	40-ml VOA	1 L Amber	REQUESTED	ESTIMATED CONCENTRATION					SPECIAL HANDLING	MS/MSD Requested	REMARKS
		Date	Time								VOCs by EPA 8260B	1,4-Dioxane by 8270 SIM	0-10	10-100	100-1,000			
33	UB-01	12/20/16	1435	X	X		X	3		X		X						
34	SE-01	↓	1450	X	X		X	3		X								
35	S-08	↓	1505	X	X		X	3		X								REPORT "J" FLAGS
36	HEW-02	↓	16:20	X	X		X	3		X								
36	↓	↓	↓	X			X		1		X							LOG CODE: HARG Geotracker ID: T0605900143

Total number of containers per analysis: 12 1 Total No. of Containers: _____

Relinquished By: / Company:	Date / Time	Received By: / Company	Date / Time
Art D... H+A	12/20/16 16:40	R... ECI	12/20/16 1640
Relinquished By: / Company:	Date / Time	Received By: / Company	Date / Time
Rudy... ECI	12/20/16 1740	S... ECI	12/20/16 1740

- No. of containers correct
- Received in good condition
- Custody seals secure
- Conforms to COC document

Send Results to:
Ken Puentes
9171 Towne Centre Drive
Suite 375
San Diego, CA 92122
Ph: 858-455-6500
kpuentes@hargis.com

Temperature on receipt _____

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: HARGIS + ASSOCIATES, INC.

DATE: 12/20/2016

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC3A (CF: 0.0°C); Temperature (w/o CF): 2.3 °C (w/ CF): 2.3 °C; Blank Sample

Sample(s) outside temperature criteria (PM/APM contacted by: _____)

Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: Air Filter

Checked by: 676

CUSTODY SEAL:

Cooler Present and Intact Present but Not Intact Not Present N/A

Checked by: 676

Sample(s) Present and Intact Present but Not Intact Not Present N/A

Checked by: 1069

SAMPLE CONDITION:

	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Sampling date <input type="checkbox"/> Sampling time <input type="checkbox"/> Matrix <input type="checkbox"/> Number of containers			
<input type="checkbox"/> No analysis requested <input type="checkbox"/> Not relinquished <input type="checkbox"/> No relinquished date <input type="checkbox"/> No relinquished time			
Sampler's name indicated on COC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with COC	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and in good condition	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers for analyses requested	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sufficient volume/mass for analyses requested	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples received within holding time	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aqueous samples for certain analyses received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfide <input type="checkbox"/> Dissolved Oxygen	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation chemical(s) noted on COC and/or sample container	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unpreserved aqueous sample(s) received for certain analyses			
<input type="checkbox"/> Volatile Organics <input type="checkbox"/> Total Metals <input type="checkbox"/> Dissolved Metals			
Container(s) for certain analysis free of headspace	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input checked="" type="checkbox"/> Volatile Organics <input type="checkbox"/> Dissolved Gases (RSK-175) <input type="checkbox"/> Dissolved Oxygen (SM 4500)			
<input type="checkbox"/> Carbon Dioxide (SM 4500) <input type="checkbox"/> Ferrous Iron (SM 3500) <input type="checkbox"/> Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

CONTAINER TYPE:

(Trip Blank Lot Number: _____)

Aqueous: VOA VOA_h VOA_{na2} 100PJ 100PJ_{na2} 125AGB 125AGB_h 125AGB_p 125PB

125PB_z 250AGB 250CGB 250CGB_s 250PB 250PB_n 500AGB 500AGJ 500AGJ_s

500PB 1AGB 1AGB_{na2} 1AGB_s 1PB 1PB_{na} 1AG_s _____ _____ _____

Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve (_____) EnCores® (_____) TerraCores® (_____) _____

Air: Tedlar™ Canister Sorbent Tube PUF _____ Other Matrix (_____) _____ _____

Container: A = Amber, B = Bottle, C = Clear, E = Envelope, G = Glass, J = Jar, P = Plastic, and Z = Ziploc/Resealable Bag

Preservative: b = buffered, f = filtered, h = HCl, n = HNO₃, na = NaOH, na₂ = Na₂S₂O₃, p = H₃PO₄,

Labeled/Checked by: 1069

s = H₂SO₄, u = ultra-pure, x = Na₂SO₃+NaHSO₄.H₂O, z_{na} = Zn (CH₃CO₂)₂ + NaOH

Reviewed by: 676

Return to Contents